FACTORS AFFECTING ORAL CONTRACEPTIVE USE AND DISCONTINUATION AMONG MARRIED WOMEN IN IBADAN NORTH LOCAL GOVERNMENT AREA, IBADAN, OYO STATE

BY

ADEBANJO, Timilehin Titilade

(B.Sc, (Edu) Health Education TASUED)

MATRIC No: 168791

A DISSERTATION SUBMITTED TO THE DEPARTMENT OF HEALTH PROMOTION AND EDUCATION, FACULTY OF PUBLIC HEALTH, COLLEGE OF MEDICINE IN PARTIAL FULFILMENT FOR THE AWARD OF THE DEGREE OF MASTERS IN PUBLIC HEALTH

(HEALTH PROMOTION AND EDUCATION)

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DEDICATION

I dedicate this research work to God, the author and finisher of my faith for the grace and privilege profound upon me to start and also saw me through my years of study.

To my modest and lovely parents, Prince Adebisi & Princess Adefunke Adebanjo for your integrity and foresight, your continuous support can never be overemphasized.

To my caring and loving husband, Oladele da-Costa: together we shall be a blessing to our generation in Jesus name.

To my couple friends and colleagues; Sam O Coker and Bejide B Regina. I feel your commitment, dedication and contributions towards the completion of my programme. Of a truth, you both deserve this and only God can reward you accordingly.

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ABSTRACT

Contraceptive use has been documented as an important factor in improving women's health. However, the level of use is sub-optimal in many low and middle income countries. In particular, oral contraceptive (OC) use has been reported to be low among Nigerian women and there is a relatively high rate of discontinuation among users. There is a dearth of information from Nigerian studies on the factors affecting the rate of OC discontinuation. This study was therefore designed to investigate the factors affecting OC use and discontinuation among married women in Ibadan North Local Government Area, Ibadan.

Using a descriptive cross-sectional design, a three-stage random sampling technique was used to select 416 consenting respondents who had ever used OC or were currently using OC from 6 wards and 12 communities. A semi-structured, interviewer-administered questionnaire was used to collect information on socio-demographic characteristics of the respondents' knowledge, acceptance, and attitude towards OC use. Other information collected include factors influencing use and subsequent discontinuation of OC. Knowledge of OC was measured on a 15-point scale and attitude on a 12-item scale. Knowledge scores of ≥14 and <14 were rated as good and poor, respectively. Attitude scores of ≥9 and <9 were rated as positive and negative attitude, respectively. Data were analysed using descriptive statistics and Chi-square test at $p = 0.05$.

Respondents' age was 35.6±7.8 years. 46.4% were muslims while others were christians. Most of the respondents were yoruba (80%), married (94.2%) while only 58.0% had completed secondary school education. More than a quarter (28.1%) of the respondents had poor knowledge of OC. The sources of information on OC were health workers (38.8%) friends (29.6%), television (16.5%) and radio (15.1%). A total of 124 (29.8%) respondents were currently using oral contraceptive while 70.2% of the respondents had discontinued the use of OC at the time of the study. A significantly higher proportion (77.4%) of respondents aged ≥25 years had discontinued the use of OC compared with younger respondents. Significantly, more muslims (36.8%) than christians (23.8%) were currently using OC. More than half (58.0%) of the respondents were satisfied with the last OC used. The most common reason for satisfaction was drug effectiveness (83.9%) in the prevention of pregnancy. Reasons given for dissatisfaction include headache (38.0%), and irregular menstruation (19.6%). Only 27.2% of the respondents had negative attitude towards OC use. Side effects

(51.6%) and missing pills (28.7%) were the major reasons reported for discontinuing the use of OC. Twenty-one percent of the respondents had the intention of resuming OC use in the future.

The use of oral contraceptive was low among married women despite good knowledge and attributed adverse side effects was the major factor responsible for discontinuation. Public enlightenment programmes on its advantages and any possible side effects can help to increase oral contraceptive use for family planning.

Keywords: Oral contraceptives. Family planning. Oral contraceptive discontinuation. Factors influencing OC discontinuation

Word count: 465

ACKNOWLEDGEMENTS

I acknowledge nnd appreciate my dissertation supervisor, Prof. Oladimeji Oladepo for his guidance, patience, chastisement as well as his constructive suggestions; all this put together made my work meaningful.

Also, my sincere gratitude goes to Dr. Babatunde Adedokun for the encouragement, tutor and mentoring, I will always bless the day I met you. Also, I sincerely thank all lecturers in the department; Prof. O. Oladepo, Prof. A.J. Ajuwon, Prof. Oyedunni S. Arulogun, Dr. F. O. Oshiname, Dr. O.E. Oyewole, Dr. M.A. Titiloye. Dr. I. O. Dipeolu. Mrs. Adeyinika T. Desmenu and Mrs. Mojisola M. Ohiwasanu for their support. piece of advice. wealth of knowledge shared with me and my colleagues.

Moreso, I appreciate the advice and support of my field adviser. Mr. John Imaledo who not only contributed immensely to my field work and dissertation but also advise me concurrently. I will not forget the Non academic staffs of my department. Chief A.A. Olubodun (Baba Egbayi). Mr. O.O. Bello. Mr. W.O. Quadri. Mr. P.F. Ayeni. Mr. T. Oyeyemi and Mr. M. Bilau (Departmental Pilot) for their prompt attention, care and support throughout my programme in this Institution.

Furthermore, My acknowledgement goes to my extended family (Adebanjo and da-Costa's families), Sinmi and Seun Adebanjo, Bolanle nnd Belinda da-Costa, Toyosi Adebanjo and Dipo da-Costa for their support. love and care from birth till this present stage. I will always love and cherish you.

In addition, I acknowledge and sincerely appreciate my friends, course mates and reading partners Coker Samson, Bejide Bolutife, Popoola Afolashade, Afolayan Temitope and Toriola Yusuf, for their input towards my success in my course of study both in classroom, exam periods and during the course of writing this dissertation, and all authors whose works were used as reference for this study. Also, I am grateful to my special friends Akunbi Funmilola and Afolayan Temitope and also my well wishers Ope Oladuni, Odunlami Sola. Ajayi Bukonla , for being there for me. You all stood by me, supported, cared and showed love to me morally, materially. In fact, I can't mention all but I am indeed grateful to you all.

In conclusion, I uppreciate my Mother, my mentor, my boss, spiritual partner, my hope and my strength, I pray that God will continue to strengthen you and you shall reap the fruit of your labour in sound health and mind.

CERTIFICATION

I certify that this project was carried out by Timilehin Titilade ADEBANJO in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria.

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GLOSSARY OF ABBREVIATIONS/ACRONYMS

AFP	Artificial Family Planning
CPR	Contraceptive Prevalence Rate
FP	Family Planning
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
IUD	Intrauterine Device
MDG	Millennium Development Goal
NDHS	Nigeria Demographic and Health Survey
NFP	Natural Family Planning
OC	Oral Contraceptives
SPSS	Statistical Package for the Social Sciences
UNFPA	United Nations Fund for Population Activities
USAID	United State Agency for International Development
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

Background of the study

In 2011, the World's population surpassed 7 billion and is projected to reach 9 billion by 2050. Population growth is generally highest in the poorest countries, where fertility preferences are the highest and governments lack the resources to meet the increasing demand for services and infrastructure (UNFPA, 2016). Worldwide, birth rates have continued to decline slowly. However large disparities exist between more developed and less developed regions. This is particularly true for Sub-Saharan Africa, where women give birth to three times as many children on average as women in more developed regions (5.1 versus 1.7 births per woman) (UNFPA, 2016). Family planning remains an important intervention needed to improve the reproductive health indicators of women in developing countries such as Nigeria. The Expert Committee of The World Health Organization (WHO) in 1997 defined family planning as "a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitude and responsible decisions by individuals and couples, in order to promote the health and welfare of family group and thus contribute effectively to the social development of the country. Contraceptive prevalence rate among married women is an important indicator for achieving the Millennium Development Goal (MDG) 5 which is concerned with improving maternal health. The state of Family Planning is poor in Nigeria. According to the 2013 Nigeria Demographic and Health Survey (NDHS), only fifteen percent of currently married women are using any contraceptive method and 10 percent are using a modern method. The most commonly used methods among currently married women are injectables (3%), followed by male condoms and the pill (2% each).

Overall 16 percent of currently married women have an unmet need for family planning (NPC and ICF Macro, 2009). Oral contraceptive pills or simply 'pills' are a brand of hormonal contraceptives which are either estrogen-progestogen contraceptives or progestogen-only contraceptives. About 71% of currently married women are aware of the pill. The most commonly used pills are Confidence 44% and Posinor (21%) while less than 5% use other types like Microbynon, Lo-Femenal, Ncogynon (NPC, 2013).

Contraceptive use is low among Nigerian women, but even among users there is a relatively high rate of discontinuation. About 21.4% of women on Implanon, a sub-dermal contraceptive discontinued use after 2 years (Ezegwu and Nwogu-Ijogo, 2004) while (Okunlola et al; 2006) found that about 29.8% of women on intrauterine contraceptive device discontinued use within 5 years. A high OC discontinuation rate of 45% was found among women in a Nigerian hospital (Abasiattai *et al.*, 2008).

Some reasons reported for discontinuation of OCs include changing method (Rakhshani *et al.* 2004) willingness to get pregnant (Shah et al, 2007), side effects (Khan, 2003) such as headache, weight gain and irregular bleeding. Factors associated with discontinuation of OCs include age (Kerns, 2003), level of education (Little J, 2012), nausea (Nanda et al. 2011), breast tenderness (Nanda *et al* 2011), side effects (Borden and Fallon *et al. 2011*), number of living children, lack of husband's support (Khan *et al*, 2003), religion (Khan, 2003), and partner influence (Kerns et al, 2003). Despite the low prevalence of contraceptive use in developing countries only few studies have examined the factors affecting oral contraceptive use among married women. Hence, this study examines the factors affecting oral contraceptive use and discontinuation among married women in Ibadan North Local Government Area, Ibadan Oyo State.

Statement of the problem

Nigeria has the largest population in Africa. The total population in Nigeria was last recorded at 178.5 million people in 2014 (NBS, 2014) reaching an all time high since 1960 where it was the lowest with an estimation of 45.2million. Unplanned pregnancies, low level of contraceptive use and high rate of discontinuation of contraceptives are some of the factors that could be responsible for the alarming population increase in the country.

An improvement in the low contraceptive prevalence rate has the power to improve indicators such as fertility and mortality rates .Studies have shown that contraceptive prevalence rate (CPR) has significant effect on the number of births. Over the years in Nigeria, CPR has increased in 1990 from 6.0% to 12.6% in 2003 and from 12.6% to 14.6% in 2008 (NPC, 2013). From 2008 to 2013, the CPR increased to 15.1% while the trend in number of birth as measured from total fertility rate (TFR) decreased from 5.9 in 1991 to 5.7 in 2003 and 2008. TFR decreased from 5.7

in 2008 to 5.5 in 2013 (NPC, 2013). Even though the uptake of contraceptives have increased over the years with decrease in total fertility rate, the rate of discontinuation of contraceptives is high as confirmed from, many Nigerian study. (Ezegwui et al 2011; Okunlola et al; 2006, Abasiattai et al, 2011). In 2013 alone, the rate of contraceptive discontinuation stood at 28 per cent (NPC, 2013). Discontinuation rates vary by method. Among modern methods, rates are highest for pills (26 percent) (NPC, 2013). Although previous surveys provide an indication of the prevalence of oral contraceptive use and discontinuation, the factors that affect its use and discontinuation among married women in Nigeria have not received the attention warranted considering the magnitude of the problem. Getting more contraceptive users to remain on their contraceptives has the capacity to prevent many unwanted pregnancies and encourage child spacing.

Justification

The current contraceptive prevalence among currently married women is still low and among users the rate of discontinuation is high. This study will examine in detail the reasons women who discontinued using OC did so and then identify the factors associated with discontinuation. The importance of the present study is in the provision of information that health care providers and policy-makers could use to redesign and formulate strategies that could enhance the continued and effective use of OC, and offer alternative contraceptive methods if OC do not work out. This in turn will have far-reaching implications for women's health as well as for the success of the country's family planning (FP) programme.

In addition, some of those barriers which will be identified will guide programme planners and hospital clinical staff to better plan focused counseling sessions for the women on OCPs. Furthermore, evidence generated from this research will guide appropriate intervention targeted towards factors promoting discontinuation of oral contraceptives among married women in Ibadan North and in Nigeria in general.

Research Questions

The study addressed the following questions;

1. What is the level of knowledge of married women about oral contraceptive?
2. Why do family planning clients accept the service of oral contraceptive?

3. What is the attitude of clients towards oral contraceptive?
4. What is the prevalence of discontinuation of oral contraceptive?
5. Why do clients stop the usage of oral contraceptive?

Broad Objective

The broad objective of the study was to investigate the factors affecting oral contraceptive use and discontinuation among married women in Ibadan North Local Government area, Ibadan, Oyo State.

Specific Objectives

The specific objectives were to:

1. Assess the knowledge of married women towards the use of contraceptive.
2. Assess the level of acceptance of married women towards oral contraceptive.
3. Determine the attitude of married women towards the family planning methods.
4. Determine the prevalence of discontinuation of oral contraceptive.
5. Identify the factors that influence the discontinuation pattern of oral contraceptive

CHAPTER TWO

LITERATURE REVIEW

Population Overview

According to the results of the 2015 key findings by United Nations, the world population reached 7.3 billion as of mid-2015 (UN, 2015). This implies that the world has added approximately one billion people in the span of the last twelve years. Sixty per cent of the global population lives in Asia (4.4 billion), 16 per cent in Africa (1.2 billion), 10 per cent in Europe (738 million), 9 per cent in Latin America and the Caribbean (634 million), and the remaining 5 per cent in Northern America (358 million) and Oceania (39 million). China (1.4 billion) and India (1.3 billion) remain the two largest countries of the world, both with more than 1 billion people, representing 19 and 18 per cent of the world's population, respectively. Report has it that the world population continues to grow although more slowly than in the recent past (UN, 2015). Ten years ago, world population was growing by 1.24 per cent per year. Today, it is growing by 1.18 per cent per year, or approximately an additional 83 million people annually. The world population is projected to increase by more than one billion people within the next 15 years, reaching 8.5 billion in 2030, and to increase further to 9.7 billion in 2050 and 11.2 billion by 2100. United Nations also reported that more than half of global population growth between 2015 and 2050 is expected to occur in Africa (UN, 2015). Africa has the highest rate of population growth among major areas, growing at a pace of 2.55 per cent annually in 2010-2015. Consequently, of the additional 2.4 billion people projected to be added to the global population between 2015 and 2050, 1.3 billion will be added in Africa (UN, 2015).

Population growth remains especially high in the group of 48 countries designated by the United Nations as the least developed countries (LDCs), of which 27 are in Africa. Nigeria is among the ten largest countries in the world and it has been estimated that Nigeria's population is currently the seventh largest in the world with its population growing the most rapidly. Consequently, the population of Nigeria is projected to surpass that of the United States by about 2050, at which point it would become the third largest country in the world (UN, 2015).

Many developing economies are characterized by rapid population growth that is partly attributed to high fertility rate, high birth rates accompanied by steady declines in death rates,

low contraceptive prevalence rate and high but declining mortality rate (Oyedokun, 2007). In Sub-Saharan Africa, the rate of population growth is one of the highest in the world, (2.8 percent) compared to the rest of the world (USAID/HPI, 2007a). Current worldwide estimates are that one-fifth of pregnancies are terminated annually by abortion (WHO-GI, 2008) and 62% of married women use a contraceptive method (PRB, 2010). Equally, the number of people in need of health and education, among other public goods is large and increasing which in turn requires large amounts of resources, personnel and infrastructure. This is likely to be an impediment towards the realization of the reduction of child mortality, improvement of maternal health, achievement of universal primary education, environmental sustainability and combating HIV/AIDS, malaria and other diseases as part of the Millennium Development Goals (MDGs) (HPI, 2007b). To address this, many countries in the Sub Saharan Africa including Kenya focused their attention on birth control measures, especially the use of family planning services. In Nigeria, family planning services have been in use since 1957 when the Family Planning Association of Kenya (FPAK) started operating family planning clinics within Ministry of Health.

Contraceptive Methods and Concept

Family planning is made possible in two ways: either through Artificial Family Planning (AFP) which uses oral contraceptives, condoms and the likes or through Natural Family Planning (NFP). Natural family planning, sometimes referred to as fertility awareness-based methods of family planning, involve usage of physical signs and symptoms that change with hormone fluctuations during a woman's menstrual cycle to help women identify the days of the cycle on which they are fertile (Choi et al, 2010). As a result, there is low level of acceptance of natural family planning. However, a lot of factors contribute to poor acceptance of natural family planning, despite its many advantages over artificial family planning, such as age, level of education, poor socio-economic status, geographic location, religion, higher number of children as well as behavioral factors such as ignorance, poor accessibility to media and health care services and inadequacy of the health care facility (Adeyemi et al, 2008). Under artificial family planning, there are various methods of contraception, including progesterone-only implants, injectable progesterone-only methods, intrauterine contraceptive devices, barrier methods, spermicides, surgical sterilization, oral progesterone-only pills, and combined oral contraceptive

pills (Curtis et al, 2002). Combined contraceptive pills first became available during the 1960s). Since that time, these pills have remained the most common method of contraception used by women aged between 15 and 34 years, especially in the developed countries (Adekunle, 2003).

Combined oral contraceptives suppress ovulation by diminishing the frequency of gonadotropin-releasing hormone pulses and eliminating the luteinizing hormone surge at mid cycle. They also change the consistency of cervical mucus, resulting in less sperm penetration, make the endometrial lining less receptive to implantation, and alter tubal transport of both sperm and ocytes (Schlesselman and James, 1997). When used correctly and consistently, combination oral contraceptives confer a better than 99% method-effectiveness (theoretic effectiveness assuming perfect use) for prevention of pregnancy (Trussell and Kost, 1987).

Table 2.1ii: Overview of contraceptive methods and concept

S/N	Types	Advantages	Efficacy	Side Effects
	A. Hormonal methods			
1.	a. Combined Oral Contraceptive Pill (COCPs) containing estrogen and progestin.70–74	Regulation of abnormal menses. Cessation of primary dysmenorrhea. Pelvic Inflamatory Disease (PID) and benign breast disease prevention. Protection against endometrial and ovarian cancers (including 10–15 years after discontinuation).	0.1 pregnancies/ 100 women in the first year of use.	**Minor side Effects:** Weight gain, acne and hirsutism are **Major side effects:** venous thrombosis and myocardial infarction. Low dose formulations like Yasmin® have fewer side effects (ie. the third generation COCPs now in current use.
2.	b. Progesteron Only Pills (POPs) containing progesterone only.75	Reduces the side effects of estrogen present in the COCPs	0.1 pregnancies/ 100 women in the first year of use.	Same as COCPs but the POPs have reduced side effects.
3.	Progesterone (POIs) Injectables Pills. e.g. Depot Medroxyprogesterone Acetate (DMPA) and norethisterone enanthate.75–79	Self-administration. Easy for non-physician provider administration. Intramuscular (IM) route enhances compliance. Convenient for most users. DMPA benefits include decrease incidence of endometrial and ovarian cancers, ectopic pregnancies, iron deficiency anemia and PID. It is also useful in reducing the frequency of sickling and epileptic seizures in sickle cell anemia and epileptic patients.	0.3 pregnancies/ 100 women in the first year of use (effect equal to female sterilization).	Menstrual irregularities (may be severe to cause discontinuation). Delay (□6 months) in return of fertility after discontinuation.

Source: Monjok E et al. (2010) Contraceptive Practices in Nigeria: Literature review and recommendation for Future Policy Decisions. *Open access journal of contraception*. 1, pp. 9-22

Table 2.1b: Overview of contraceptive methods and concept

S/N	Types	Advantages	Efficacy	Side Effects
4	d. Subdermal implants: Norplant®, Jadelle®, and Implanon® are the current implants in use.77,80	These implants release low-dose of progesterone over an extended period of time. Norplant and Jadelle for five years and Implanon for three years.	Better compliance if no discontinuation.	0.1 pregnancies/100 women in the first year of use.
5	e. CEPIs containing estrogen and progesterone administered monthly.81	Less menstrual irregularities than POIs and the return to fertility is shorter (within six weeks).	0.1 -0.4 pregnancies/ 100 women in the first year of use.	Low compliance (many women may not return every month for injections).
6	f. EC-progesterone (LNG) EC (Postinor II®), Cu IUCD (non-hormonal EC).82	Highly effective with few side effects if used correctly.	Postinor II reduces the risk of pregnancy by 85% when administered correctly (1.5 mg of LNG within 72 hours). The Cu IUCD has a failure rate of □0.1% when inserted within five days after unprotected vaginal intercourse	Minimal side effects. Good compliance rate

Source: Monjok E et al. (2010) Contraceptive Practices in Nigeria: Literature review and recommendation for Future Policy Decisions. *Open access journal of contraception. 1*, pp. 9-22

Table 2.1e: Overview of contraceptive methods and concept

S/N	Types	Advantages	Efficacy	Side Effects
	g. Vaginal rings: impregnated with combined estrogen and progestin hormones (Nuvaring®) or progestin (Progering®).83	Upon removal, the plasma hormone levels return to normal levels and fertility rapidly returns.	1.2–1.5 pregnancies/ 100 women in the first year of use.	Minimal side effects. Vaginal insertion is for three weeks with one free week for menses. After the menses a new ring is inserted
	h. Transdermal Contraceptive Patch (TCP): contain estrogen and progestin hormones applied on the skin as a patch, eg, OrthoEvra®.84	Upon removal, the plasma hormone levels return to normal levels and fertility rapidly returns.	0.1–0.3 pregnancies/ 100 women in the first year of use.	Skin irritation or rash (only 2% of users). The TCP is applied for three weeks (one patch per week) followed by one free week to allow for menses. The abdomen, upper torso, upper outer arm, and buttocks are the common sites of application.
	i. Male hormonal methods: testosterone or a combination of testosterone and progestin or a gonadotrophin releasing hormone. 82-85	Rapid reversal of discontinuation without any effect on prostate volume and Prostate-Specific Antigen (PSA) levels.	-	Nonsteroidal methods are being investigated, including the possibility of a vaccine targeting spermatozoa and oocyte surface that are accessible to antibodies.

Source: Monjok E et al. (2010) Contraceptive Practices in Nigeria: Literature review and recommendation for Future Policy Decisions. *Open access journal of contraception*, 1, pp. 9-22

Table 2.1d: Overview of contraceptive methods and concept

S/N	Types	Advantages	Efficacy	Side Effects
	B. Non hormonal methods			
1	a. IUCDs: the CuT380 is the most commonly used.86,87	CuT380 offers 10 years of protection against pregnancy.	0.1 pregnancies/ 100 women in the first year of use.	Menstrual irregularities. Feeling of a foreign body in some women. Abnormal vaginal discharge, vulval/ vaginal itching and dislodgement of the IUCD are some of the other side effects. Newer models, eg. LNG-IUCD, frameless IUCD (Gynefix®), Cu Safe300®, Sof-T®, ICFD®, and Fincoid-350® are available.
2	b. Barrier methods eg. male condoms (latex or polyurethane) Female condom (FC1 and FC2) or Reddy female condom or V-Amour. Other female devices are cervical cup, the cervical diaphragm, and the Lea's vaginal shield.88, 90	Offers protection against STI including HIV. The male condom is cheap and widely available and free of side effects.	Failure rate is high at 12% per year. When used with a spermicidal agent, the failure rate is reduced to about 8% per year.	Condoms are free of side effects but may fail due to leaks, tears, or slippage during intercourse and withdrawals.

Source: Monjok E et al. (2010) Contraceptive Practices in Nigeria: Literature review and recommendation for Future Policy Decisions. *Open access journal of contraception*, 1, pp. 9-22

Table 2.1c: Overview of contraceptive methods and concept

S/N	Types	Advantages	Efficacy	Side Effects
	C. Sterilization a. Female sterilization: the two commonly used methods are laparoscopic and mini-laparotomy sterilization.91 –94	Permanent occlusion	If fallopian tubes correctly occluded, there is good efficacy	Minimal side effects of surgical procedure only, eg, bleeding, hematoma, and surgical infection.
	b. Male sterilization: two methods are the no-scalpel method and the nonsurgical vas occlusion method.95	Permanent occlusion (irreversible).	Good efficacy if occlusion is done correctly.	Side effects of the surgical procedure (bleeding, hematoma chronic pain, epididymitis). Alternative vasectomy methods are under investigation aimed at improving the reversibility of the procedure.
	Depot Medroxy Progesterone Acetate (DFABMs) a. Standard-day method which identifies the fertile window during the menstrual cycle.96	Free of side effects. Cheap. Encourages union and marital dialogue.	High failure rate.	Free of side effects.
	b. Two-day method which identifies the fertile type of cervical secretions present during the most fertile two days.97	Free of side effects. Cheap. Encourages union and marital dialogue.	High failure rate.	Free of side effects

Source: Monjok E et al. (2010) Contraceptive Practices in Nigeria: Literature review and recommendation for Future Policy Decisions. *Open access journal of contraception*, 1, pp. 9-22

Table 2.1f: Overview of contraceptive methods and concept

S/N	Types	Advantages	Efficacy	Side Effects
	E. Traditional methods			
	a. Periodic abstinence.	Free of side effects.	High failure rate	Free of side -effects.
	b. Withdrawal method (coitus interruptus).	Cheap.	–	–
	c. Prolonged breast feeding. Free of side effects	Encourages union and marital dialogue	–	–

Source: Monjok E et al. (2010) Contraceptive Practices in Nigeria: Literature review and recommendation for Future Policy Decisions. *Open access journal of contruception. 1.* pp. 9-22

Prevalence of Contraceptive use among women of childbearing age in Nigerian

Although the level of contraceptive use among married women aged 15– 49 doubled between 1990 and 2003. from 6% of to 12%. the overall level was still low. Furthermore, almost half of this use involved traditional methods, which are less effective than modern ones (Sedgh et al, 2009). Use of modern contraceptives among married women in 2003 was much higher in the South West region than in any other part of the country 21%, compared with 12% in the South Central and South East regions. 9% in the North Central region and about 2% in the North East and North West regions) (Sedgh et al, 2009). By comparison, contraceptive use was considerably more prevalent among same-aged sexually active women who were not married: In this group. the proportion using any method rose from 38% to 47% between 1999 and 2003. Moreover, the level of use of modern methods almost tripled during that period from 12% to 33%. while that of traditional methods declined from 26% to 14%; a trend that has probably given sexually active unmarried women using contraception more effective control over their fertility than their married peers.

By 2003, the level of use of modern methods among sexually active unmarried women of childbearing age was highest in the South West region 53%, moderate in the North Central and South South regions 32–35% and lowest in the North-East region 10% (Sedgh et al, 2009). Another study revealed that One third of respondents (36.7%) were not using any family planning method at the time of the study; of these, 15.2% were not using them because of fear of side-effects of modern contraceptives. 14.4% wanted to get pregnant, and over half were not sexually active (57.6%). Forty-two of the respondents (11.7%) had discontinued one or another form of contraceptive in the past because of side effects of the method used (Akintade et al, 2011).

Factors Affecting the Use of Family Planning Among Married Women

Contraceptive prevalence rate CPR-which is the proportion of women of reproductive age 15-49 years who are using or whose partners are using a contraceptive method at a given point in time is 30% which was 29% in 2009 and 2008 while the most developed country like USA has 71% CPR for all the methods (WHO, 2006; PRB, 2010). The total number of children the average woman in a population is likely to have based on current birth rates throughout her life (WHO,

2009) have fallen largely due to the wide spread and increasing use of modern methods of contraception. However, in some developing countries like Pakistan the uptake of contraception remains low due to cultural, economical and political barriers. After nearly five decades of government-initiated family planning programmes, the increase in contraceptive prevalence rate in Pakistan is slow. The use of modern methods is only 22%. While the average CPR of Asia is 66% (PRB, 2010). Total fertility rate in Pakistan ranges from 4.1 to 5.49 and life expectancy is 66 years while the total fertility rate of Asia is 2.2 and life expectancy 70 years (PRB, 2010). Though the total fertility has decreased in Pakistan still it has the highest rate in South Asia. The major myth regarding contraception is that it causes harm to womb and causes sterility (Agha, 2010). Also, people are not aware regarding the emergency contraceptive. While enquiring regarding their religious opinions, more than 80% declared it a sinful act. This fact may prevent them from the use of modern contraceptives. The 3rd major side effect after menstrual irregularities and weight changes was the feeling of guilt with the use of contraceptives which reflects their religious opinion regarding contraception (Musarrat et al, 2011).

Research conducted in Kenya identified and considered in various facility factors, these included family planning provider, quality of family planning services, availability of family planning services, user fees charged for family planning services, and proximity of the family planning facility. The second most important determinant was religion, which took the value of one if Catholic and zero, otherwise. The marginal effect was negative 0.28, implying that the probability of a woman using family planning services if she is a Catholic was 28 percent lower compared to others with different religious background such as Protestant and Muslims. This is because catholic faith discourages its faithful from using contraceptives as birth control measures. Faithful are instead encouraged to rely more on observation of menstruation cycles and natural safe days of a woman. This finding clearly indicates a significant difference in the use of family planning services between Catholics and other religions (Akinrinola, 2009). However, the same study reveals that out of the 51 percent that were using contraceptives, 49 percent obtained the services from health facilities, 15 percent obtained from pharmacies, while a paltry 6 percent obtained from both workplace and mobile health facility. Given the low levels of education among women in slums together with high levels of school dropout rates and

insufficient knowledge of family planning services, the utilization of family planning is expected to be low compared to the national level estimated at 46 percent (Okech T et al, 2011).

Factors Affecting the Use of Oral Contraceptives

Contraception is used for birth control, the spacing of pregnancies, and the limitation of family size (van Vlijmen et al, 2007). Contraception has been a very sensitive and controversial subject in traditional African society as a result of the society's inherent barriers to the use of contraception (Curr and Khan, 2010). These barriers include a lack of awareness, a lack of access, cultural factors, religion, an opposition to the use of contraception by sexual partners or family members, and a fear of the health risks and side effects associated with contraceptives (Abiodun and Balogun, 2009).

Myths regarding increased cancer risks and problems with compliance have led to a significant reduction in use effectiveness (effectiveness that occurs in actual practice). Incorrect pill usage, unfortunately, leads to contraceptive failure and an increase in abnormal or breakthrough bleeding and, ultimately, pill discontinuation. Other factors that also affect use effectiveness include perceived convenience, cost, and motivation. Overall use effectiveness, because of these factors, ranges between 94% and 97% (Trussell and Kost, 1987). Efficacy is reported either as a Pearl Index or as a life-table analysis. Perl Index is calculated by taking the total number of unintended pregnancies as the numerator, with the denominator being the total months or cycles of exposure (Burkman, 2002). This ratio is then multiplied by 1200 if months are used and 1300 if menstrual cycles are used. Although relatively simple to perform, the index does not account for duration of exposure, such that studies with different durations of exposure cannot be accurately compared. The life-table analysis is preferable because it does account for duration of use and can be used more accurately for direct comparisons between studies (Trussell et al, 1990). Regardless of the method used to calculate efficacy, a number of factors influence results of clinical trials including characteristics of the study population; for example, fertility, sexual activity, and methodological issues such as frequency of pregnancy testing and follow-up of subjects. Finally, there has been one recent study suggesting that women weighing more than 155 pounds using oral contraceptives are at increased risk for contraceptive failure (Holt et al, 2002).

Previous studies with contraceptive implants and the transdermal contraceptive patch have also indicated that women heavier than certain weights may experience more contraceptive failures than women who weigh less (Holt et al., 2002). In many cases, the main reason for non-use of contraception given by former users is logical either the women considered themselves not at risk, or were trying to become pregnant. Of concern is the number of former users who were at risk of unplanned pregnancy and who were not using contraception because of health concerns, fear of side-effects, or supply problems, particularly the numbers of former users of pill or injectable contraceptives. So too is the smaller number who perceive opposition to their using contraception, especially women who last used condom or withdrawal. These are areas which obviously require further attention among service providers and educators.

Contraceptive use and choices vary widely in Nigeria according to type of health facility, geopolitical zone, and within urban or rural settings. Various factors, related to both supply and demand, account for these variations and contribute to the low levels of contraceptive use and choices in Nigeria. On the supply side are issues such as limited availability, quality, and cost of family planning services. As a consequence of limited availability, many Nigerians (particularly in rural areas) lack access to modern contraceptive and family planning services. In areas where services do exist, their quality is often poor, with inadequate contraceptive supplies, insufficient numbers of trained service providers, poor interpersonal skills on the part of providers, and limited essential equipment. Research on factors associated with demand for contraceptives and family planning services in Nigeria has identified the relative powerlessness of women (especially in northern Nigeria), household poverty, low level of education (especially in northern Nigeria), myths and rumours about modern contraceptive methods, parity, pronatalist attitudes, and widespread preference for male children, as key influences on contraceptive use. In addition to these factors, and especially in northern Nigeria, early marriages and early initiation of sexual activity have contributed significantly to the high fertility and subsequent higher prevalence of maternal and foetal complications.

Factors Influencing Discontinuation of Oral Contraceptives among Married Women

In a research by Westhoff and Heartwell (2008), oral contraceptive continuation users were defined as being a continuous and current (that is, having taken a pill within the past seven days) OC user at the time of the follow-up interviews. While Women who had not taken any OC for greater than 7 days prior to the interview (not counting the placebo pills) were classified as discontinuers. They chose the 7-day threshold based on sensitivity analyses in their pilot studies. Side effects were reported to be the most commonly reported reason why women discontinue using the OC. In a cross-sectional survey of 6676 European women, participants identified side effects as the most common reason for discontinuing the OC (Rosenberg et al. 1995). Women in that survey who reported past side effects were about twice as likely to have discontinued the OC as women who reported not experiencing side effects. The value of this comparison is limited, however, by the cross-sectional and retrospective nature of the data collection. In a prospective cohort study of 1657 U.S. women enrolled from family planning clinics and private practices, 37% of OC users who discontinued cited side effects as the reason for discontinuation; however, this study had no information regarding the prevalence of side effects among the women who continued OC use (Rosenberg and Waugh, 1998).

According to Rosenberg and Waugh (1998) most discontinuers stopped the OC for logistic reasons. They categorized running out of pills, being unable to get back to the clinic, forgetting to take the pill, and similar problems related to either obtaining the pill or using it correctly as logistic reasons for stopping. Side effects were the next most common reason for stopping; side effects included the symptoms they asked about specifically and menstrual changes, acne, and hair changes, as well as stating "I didn't like it". They also included fear of side effects in this category, but very few women in this study stated that fear of side effects was their reason for stopping. Finally, the remaining women offered other reasons for stopping – the "other" reasons were appropriate, and included (in order of frequency) no sexual activity, pregnancy, medical contraindication to the OC, and change to a different contraceptive method. We could not distinguish pregnancies associated with correct versus incorrect pill use, but the expected number of perfect-use pill failures would be very low. The women who reported stopping the OC due to side effects had more negative scores for the weight, headache, moodiness, and visual changes variables than the women who reported quitting for other reasons ($p < 0.01$ for all comparisons). In contrast, decreased sexual satisfaction was not associated with stopping due to side effects;

more specifically, individual subjects did not report decreased sexual satisfaction as a reason for stopping the OC.

In the study of OC initiation and continuation by Westhoff and Heartwell (2008), participants were asked at three months and again at six months about any changes in the occurrence of or intensity of specific symptoms. They chose to examine only symptoms that many clinicians and patients view as OC side effects: weight change, headaches, mood changes, and sexual satisfaction. They also asked the subjects if they attributed these symptoms to the OC or to other causes. Discontinuers were asked to identify reasons for discontinuation. This analysis compares these four specific symptoms among women who discontinue the OC during the first six months of use to those among women who continue the OC.

More than 90 million women worldwide now use combination (estrogen plus progestin) oral contraceptives (Fertil, 1999). The use of modern contraceptives as one dimension of fertility change has been studied extensively and the safety of oral contraceptives (OC) has been documented and is well established (Trussell and Raymond, 2009). During the past four decades, *the pill* has probably been one of the most studied medications in the history of medicine, with the data clearly documenting overall safety and efficacy. In the United States, the National Center for Health Statistics has been conducting, at varying intervals, national fertility surveys known as the National Survey of Family Growth. Recent surveys presented data for 1994, 1995, and 2002 (Piccinino & Mosher, 1998; Henshaw, 1998). The number of women using contraception in the 15–44 years age group increased from 30 to 39 million users compared with results in 1982. Unfortunately, this overall increase in use of contraception was accompanied by a modest decrease in the use of oral contraceptives. Further, despite improved overall use of contraception, there remained approximately 5% of women in this age group, or 3 million women, who were not using contraception and were at risk for unintended pregnancy. Among the pregnancies occurring in this time frame, 49% were unintended, yet approximately one half of these women reported use of contraception. A secondary analysis from the survey also supported the concept that inconsistent use of contraception is a significant contributor to unintended pregnancy (Peterson et al. 1998). For example, among oral contraceptive users, 16% of women indicated they missed three or more pills within a three month period. Factors

associated with inconsistent use included new users, Hispanic and black ethnicity, low income status, and having had a previous unintended pregnancy. Although there was a trend for teenaged women to have a greater likelihood of inconsistent use compared with other age groups, the differences among various age groups were not statistically significant. These findings clearly suggest that there is a substantial need to improve the ability of women to obtain contraception, select an appropriate method, and use the selected contraceptive method correctly.

The Nigeria Demographic and Health Survey (NDHS) found in 2008 that only 10% of married women of reproductive age use contraceptives and that unintended pregnancies is the result of contraceptive method failure, misuse or discontinuation (UNFPA, 2010). Data from the National Survey of Family Evidence abound that women who misuse or discontinue OC are three times as likely to have an unintended pregnancy as those who continue the method (UNFPA, 2010). Although, the strong negative socio-cultural perception in our environment remains inevitable, the major concerns have been raised over the notable complications and diseases associated with long term safety of these agents. Self report may remain the most common oral contraceptive use measure of convenience, ease of administration, and noninvasiveness (Osterberg and Blaschke, 2005), yet, it is the least rigorous way to assess contraceptive behavior, given the strong potential for reporting bias (Pinter, 2002). This is not without the likelihood of social desirability bias among populations. It is pertinent to stress that inconsistent use of the terms compliance, adherence, continuation, and pill-taking behavior have contributed to conflicting and equivocal findings in contraceptive research (Stuart and Grimes, 2009). Even though a considerable body of work on oral contraceptive use patterns exists, users and sometimes nonusers rarely use consistent terminology appropriately and might have often used them interchangeable (Coeytaux et al, 2009).

Women acceptance of family planning services

In a study conducted in Ghana, women who were not using contraception at the time of the survey were asked to give the main reason why not. The reasons given were regrouped into nine categories: not having sexual intercourse or having sexual intercourse infrequently; being subfecund, infecund, menopausal, or having had a hysterectomy, postpartum abstinence, breast-feeding or pregnancy; wanting more children, the respondent, her partner, other people, or her

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religion being opposed to contraceptive use ('opposition'); the respondent either not knowing a method or a source('lacks knowledge'); fear of side-effects or health concerns ('health fears'); costs of contraception, lack of access to sources, or inconvenient to use contraception ('supply problems'); contrueception interferes with body's natural process, don't know or other ('other') (Nicholas, 2003). The reason most frequently given by women for not using contraception was that they were not in a regular sexual relationship, and hence presumably did not consider themselves at risk. Over a fifth of former users gave a reason relating to a current or recent pregnancy.

This percentage was nearly 10 times the percentage of never-users giving this reason. Wanting to have a child was the reason for non-use by about a sixth of former users. Significant numbers cited health fears, with the percentage of former users giving this reason being somewhat higher than for never-users. In contrast, the percentage of former users citing opposition to contraceptive use by woman, her husband, other people, or by her religion was only a third of that for never users. Lack of knowledge of contraceptive methods or sources of supply was insignificant as a reason for nonuse by former users, but accounted for 13% of non-use by never-users. Contraceptive supply factors, such as cost or access to supplies, were cited by a small percentage of women not using contraception.

No sexual intercourse was by far the most common reason for those whose last method was the condom, rhythm, or withdrawal, methods which require the active cooperation of a male partner. Reasons relating to a recent pregnancy or to wanting more children featured prominently for all methods. Women who last used pill or injectables were far more likely to cite health fears. Supply problems, particularly the cost, loomed large as reasons for not using contraception among women whose last method was injectables, and to a lesser degree, among former pill users. Relatively high percentages of women who used condom or withdrawal cited opposition as their reason. Of former users, younger women were more likely than older women to cite not having sexual intercourse or having sexual intercourse infrequently as their reason for not using contraception. Sub fecundity was the main reason for women aged 45- 49 years, but was not important for younger women.

Sources of Oral Contraceptive Supplies

Various studies in the six geopolitical zones of Nigeria have indicated that the main sources of contraceptives, in decreasing order of frequency, are patent medicine stores, pharmacy shops, friends/siblings/partners, and health facilities (Oye-Adeniran et al, 2005; Abiodun and Balogun, 2009). Among the health facility sources, the availability of contraceptives is higher at private clinics than at government family planning and maternal health clinics or hospitals (Okpani and Okpani, 2000; Abiodun and Balogun, 2009). In addition, more married than single women receive contraceptives from the government-run health facilities, including hospitals (Okpani and Okpani, 2000; Abiodun and Balogun, 2009). Studies in Ghana and Kenya have also shown that these commodities are obtained mainly from the private sector (GPC and ORC Macro, 2004; KPC and ORC Macro, 2004). In contrast, in countries like Zimbabwe and Tanzania, where there is strong government involvement in the provision of family planning services, the majority of users obtain oral contraceptives and condoms from the public sector (ZPC and ORC Macro, 2000; Chen and Guilkey, 2003). This public sector-driven commodity source of contraceptives is also seen in India and Indonesia (Ramesh et al, 1996; Mize and Byrant, 1996). The trend of the patent medicine shop being the most important source of contraceptive commodities in Nigeria is worrisome. The type of information obtained on contraception from a patent medicine shop is likely to be incorrect because these shops are managed by traders who themselves may have little or no knowledge of contraceptives. Unfortunately, the pharmacy shops which are managed by qualified pharmacists are few in number and are limited to the urban areas. The patent medicine dealers, however, are more numerous and found in the vast number of rural and peripheral villages, where 60%–70% of the population resides. It is also in these rural areas that there are no practising pharmacists or doctors to advise on contraceptive choices.

In most communities in Nigeria, single women are therefore more likely to obtain contraceptive information and commodities from patent medicine dealers, because single women are not culturally accepted at conventional family planning clinics, especially those run by the government (Oye-Adeniran et al, 2005). Religion and Christian denomination have also been shown to have an influence on contraceptive usage. Research by Oye-Adeniran et al (2005) has shown that while the Roman Catholics get their contraceptives mostly from patent medicine

shops, the majority of Christians get theirs from general hospitals. Catholic patronage of patent medicine shops and market places may be connected with a religious objection to the use of modern contraceptive methods. Muslims in the same study also patronized the patent medicine shops more often because of the reported high disapproval by Muslims of contraceptive use (Oye-Adeniran et al, 2005). In the same survey, the age of the respondent was also important in the source of contraceptive commodity. Most adolescents used patent medicine shops, but from the age of 25 years there is a greater tendency to obtain contraceptives from the private/general hospitals. This finding is largely due to societal disapproval of sexual intercourse before marriage, the group to which most adolescents belong. Adolescents are also most likely to obtain condoms and OCs over the counter at patent medicine shops where these cultural inhibitions are less evident. Unwanted pregnancy and unsafe abortions are more common among young persons (15–24 years), yet it is this same age group that Nigerian cultural forces have prevented from benefiting from adequate information regarding contraception.

Sources of Information

Various studies in the six geopolitical zones of Nigeria have indicated that the main sources of information about contraception, in descending order of frequency, include friends/ siblings, radio/television/newspapers/magazines, school lectures/workshops/seminars, and health workers. (Oye-Adeniran et al, 2009) The poor contribution of health workers to dissemination of contraceptive information is worrisome. More reliable information should emanate from health workers at the family planning clinics but, in Nigeria, the family planning clinics are not young women- or adolescent-friendly (Abiodun and Balogun, 2009). The main reason for this unfriendliness is rooted in the cultural fabric of Nigerian society where many still regard family planning services as the preserve of married people (Otoide et al, 2001). Recent observations in some centers and communities indicate staffs in health centers are becoming an important source of information, especially in southern Nigeria (Abasiattai et al, 2008). This is probably because of the increased level of education among women and mothers in southern parts of Nigeria (Abasiattai et al, 2008).

Conceptual Framework

A conceptual framework presents a systematic way of understanding events and situation. It is a set of concepts, definitions and proportions that explains or predicts these events or situations by illustrating the relationships between variables (NCI, 2005). The purpose of theory in research is to help the researcher to be able to explain the dynamics of health behaviours including processes of changing them and the influences of many forces that affect health behaviours such as the social and the physical environments. Theory and frameworks also provide planners the most suitable information such as target audiences, methods for fostering change and outcomes for evaluation before planning and implementing health promotion interventions (NCI, 2005). The PRECEDE-PROCEED model used in this study to guide in the design of this study and to capture all the variables or elements involved in the study.

PRECEDE

The word "PRECEDE" is an acronym for "Predisposing, Reinforcing and Enabling factors, and Causes in Educational Diagnosis and Evaluation". In 1980, Green, Kreuter, Deeds and Partridge developed this model. PRECEDE model involves the predisposing, enabling and reinforcing causes in educational diagnosis and evaluation. It was developed to provide a focused target for intervention and gives insights concerning evaluation. This model is a framework for the process of systematic development and evaluation of health education programmes. An underlying premise of this model is that health education is dependent on voluntary cooperation and participation of the client in a process which allows personal determination of behavioral practices; and that the degree of change in knowledge and health practice is directly related to the degree of active participation of the client. It has served as a conceptual framework in health education, planning aimed at diagnosing the health problems of a community, understanding the factors that influence the people's behaviour and developing intervention to promote healthy behaviour (Green and Kreuter, 1991). It emphasizes the importance of careful preparation before any intervention program is launched, and comprises a diagnostic approach for deciding what type of intervention is likely to be useful in altering behaviour, and then for assessing its likely impact. Premises include: health education requires voluntary cooperation of the client, health behavior is determined personally; the more actively the client participates the more they will

earn' The PRECEDE model assumes that the many factors that influence health behaviors should be identified in order to plan an appropriate educational intervention (Green, 1984). This model is multidimensional, founded in the social/behavioural sciences, epidemiology, administration and education. As such, it recognizes that health and health behaviours have multiple causations which must be evaluated in order to assure appropriate intervention. The comprehensive nature of PRECEDE allows for application in a variety of settings such as school health education, patient education, community health education, and direct patient care settings.

PROCEED was added to the model in the late 1980s based on L. Green's experience with Marshall Kreuter in various positions with the federal government and the Kaiser Family Foundation. PROCEED was added to the framework in recognition of the emergence of and need for health promotion interventions that go beyond traditional educational approaches to changing unhealthy behaviors. The administrative diagnosis is the final planning steps to "precede" implementation. From there "proceed" to promote the plan or policy, regulate the environment, and organize the resources and services, as required by the plan or policy. The components of PROCEED takes the practitioner beyond educational interventions to the political, managerial, and economic actions necessary to make social systems environments more conducive to healthful lifestyles and a more complete state of physical, mental and social well-being for all. PROCEED is an acronym for Policy, Regulatory, Organizational Constructs in Educational and Environmental Development. The purpose of the PRECEDE/PROCEED model is to direct initial attention to outcomes rather than inputs. This forces planners to begin the planning from the outcome point of view. In other words, you as a programme planner begin with the desired outcome and work backwards to determine what causes it, what precedes the outcome. Intervention is targeted at the preceding factors that result in the outcome. The planning process outline in the model rests on two principles:

- The principle of participation, which states that success in achieving change is enhanced by the active participation of members of the target audience in defining their own high-priority problems and goals and in developing and implementing solutions.
- The important role of the environmental factors as determinants of health and health behaviour such as media, industry, politics, and social inequities

The PRECEDE/PROCEED framework has been designed to avoid the philosophical trap that has caught previous efforts to codify the practices of health education. The overriding principle in this approach to health education is that health behaviour must be voluntary behaviour. Health means different things to different people, serves different purposes for different people, and is more or less important to different people.

Description of the model

PRECEDE - the first 5 phases

Phase 1 - Social Diagnosis: The focus of this phase is to identify and evaluate the social problems which impact the quality of life of a target population. This requires programme planners to gain an understanding of the social problems which affects the quality of life of the patient, consumer, student, or community, as those populations see those problems. This followed by the establishment of a link between these problems and specific health problems which may become the focus of health education. The link is essential in life and, in turn, how the quality of life affects social problems. Methods used for social diagnosis may be one or more of the following: Community Forums, Nominal Groups, Focus Groups, Surveys, Interviews, Central location intercept

Phase 2 - Epidemiological Diagnosis: This phase helps to determine health issues associated with the quality of life. It helps identify behavioral and environmental factors related to the quality of life issues. The focus of this phase is to identify specific health problem and non health factors which are associated with a poor quality of life.

Describing these health problems can:

1) Help establish relationships between health problems, other health conditions, and the quality of life;
2) Lead to the setting of priorities which will guide the focus of programme development and resources utilization; and
3) Make possible the delineation of responsibilities between involved professionals and organizations and agencies. These priorities are defined as programme objectives which

define the target population (WHO), the desired outcome (WHAT), and HOW MUCH benefit the target population should benefit, and by WHEN that benefit should occur. Examples of Epidemiological data includes: vital statistics, years of potential life loss, disability, prevalence, morbidity, incidences and mortality. From phase 1 und 2 programme objectives are created - that is the goal or goals you hope to achieve as a result of implementing this programme

Phase 3 - Behavioral and Environmental Diagnosis: This phase focuses on the systematic identification of health practices and other factors which seem to be linked to health problems defined in Phase 2. This includes non-behavioural causes (personal and environmental factors) that can contribute to health problems, but are not controlled by behaviour. These could include genetic predisposition, age, gender, existing disease, climate, and workplace. the adequacy of health care facilities, etc. Also assessed are the behaviors which cause health problems in the target population. Another important component of this phase is the determination of the importance and relative changeability of each behavioral cause. It is critical that a behavioural diagnosis is completed for each health problem identified on Phase 2. This will allow all the planners to choose target behaviors which will become the focus of specific educational interventions. The Behavioral Matrix is used to identify targets where the most effective intervention measures can be applied. More important Less Important More Modifiable High priority for intervention Low priority, unless political considerations dictate Less Modifiable Innovations required to develop intervention No programme required.

Behavioural Diagnosis is the analysis of behavioural links to the goals or problems that are identified in the epidemiological or social diagnosis while environmental diagnosis is a parallel analysis of factors in the social and physical environment other than specific actions that could be linked to behaviors.

Phase 4 - Educational Diagnosis and Organizational Diagnosis

This phase assesses the causes of health behaviours which were identified in Phase 3. Three kinds of causes are identified - predisposing factors, enabling factors, and reinforcing factors. The critical element of this phase is the selection of the factors which if modified, will be most likely to result in behaviour change. This selection process includes identifying and sorting (positive and negative) these factors in appropriate category, prioritizing factors among categories, and prioritizing with categories. Prioritization of factors is based on relative

importance and changeability. Learning objectives are then developed which focus on these selected factors. Pinpoints the factors that must be changed to initiate and maintain behavioral change. It is during this phase that specific intervention objectives are created and the intervention itself will be implemented. Educational and organizational diagnosis looks at the specifics that hinder or promote behaviours related to the health issue.

Predisposing Factors - any characteristics of a person or population that motivates behaviour prior to the occurrence of that behaviour knowledge, beliefs, values, attitudes.

Enablers - characteristic of the environment that facilitate action and any skill or resource required to attain specific behavior such as accessibility, availability, skills, laws (local, state, federal) etc.

Reinforces - rewards or punishments following or anticipated as a consequence of a behaviour. They serve to strengthen the motivation for behaviour. Reinforcing factors includes family, peers, religious leaders, teacher etc.

Phase 5 - Administrative & Policy Diagnosis

This phase focuses on the administrative and organizational concerns which must be addressed prior to program implementation. This includes the assessment of resources, budget development and allocation, development of implementation timetable, organization or personnel within programs, and coordination of the programme with all other departments, and institutional organizations and the community.

Administrative Diagnosis - the analysis of policies, resources and circumstances prevailing organizational situations that could hinder or facilitate the development of the health programme.

Policy Diagnosis - to assess the compatibility of program goals and objectives with those of the organization and its administration; does it fit into the mission statements, rules and regulations.

PROCEED - the second 4 phases

Phase 6 - Implementation of the programme

Phase 7 - Process Evaluation is used to evaluate the process by which the programme is being implemented.

Phase 8 - Impact Evaluation measures the programme effectiveness in terms of intermediate objectives and changes in predisposing, enabling, and reinforcing factors.

Phase 9 - Outcome Evaluation measures change in terms of overall objectives and changes in health and social benefits or the quality of life. It takes a very long time to get results and it may take years before an actual change in the quality of life is seen.

In applying the model to the study, the focus will be on the PRECEED part of the model.

Predisposing Factors

The predisposing factors are the behavioural antecedent factors that make any health related behaviour more (or less) likely to occur. They are the factors that must be present before a behavioural decision can take place. The predisposing factors include knowledge, attitudes of health workers, perception on, values and inherent qualities which are useful for describing the discontinuation of oral contraceptives among married women.

Enabling Factors

These are the factors that make any health related behaviour more or less likely to occur. These factors include cost, time, skills, place and resources. With respect to financial resource available, a woman may discontinue the use of oral contraceptive if she cannot afford to buy it. The little or no risk associated with the use of oral contraceptive increases the likelihood of an increase in its use. The supply and sources of information for oral contraceptive use can contribute to its use or disuse as the case may be.

Reinforcing Factors

These are the factors that are related to the influence of significant others such as peers, parents, husband, other relatives, religious bodies, the mass media etc. For instance, a lady may be forced to discontinue an oral contraceptive use in order to please her husband or continue use if her husband encourages and embrace family planning.

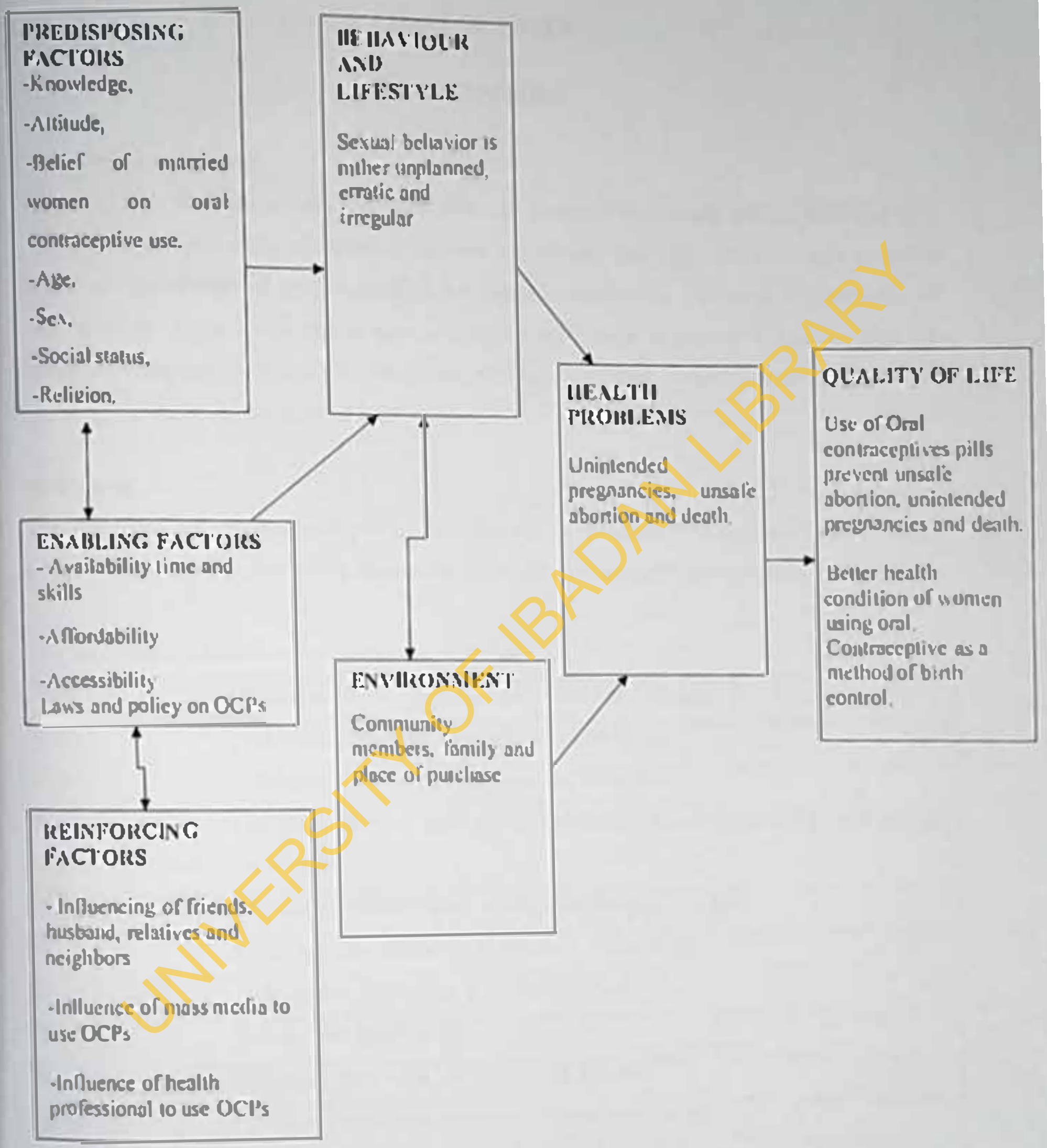


Figure 2.1 Application of precede model to factors affecting oral contraceptive use and discontinuation among married Women in Ibadan North local government Area Adapted from (Green and Kreuter, 2005)

CHAPTER THREE

METHODOLOGY

Study Design and Scope

This study was descriptive cross sectional and was designed to identify factors affecting oral contraceptive use and discontinuation among married women. The study further sought to assess the knowledge of married women towards the use of contraceptive, the level of acceptance of married women towards oral contraceptive, determine the attitude of married women towards the family planning methods and the prevalence of discontinuation of oral contraceptive in the region where the study was carried out.

Study Area

The study site for this research project was Ibadan North Local Government Council Area, which is made up of twelve wards. Each of these wards is made up of communities and areas.

The list of the ward and communities were as follows:

Ward 1	Beere, Kannike, Agbadagbudu, Oke-Are, Odo-oye
Ward 2	Ode-Oolo, Inalende, Onyarin and Oke Oloro
Ward 3	Adewo, Yemetu, Oke-Aremo, and Isale-Alfa
Ward 4	Ita Iba, Idi-Oma, Oje-Igosun, Kube, Oke-Apon, Abenla, AliwoTowl and NTA areas
Ward 5	Bashorun, Oluwo, Ashi, Akingbola, Ikoloba, and Gate
Ward 6	This has only one large community - "Sao Area"
Ward 7	Oke-Itunu, Coca-cola, and Oremeji Area
Ward 8	Sango and Ijokodo area
Ward 9	Mokola, Ago Tapa and Premier Hotel area
Ward 10	Bodija, Secretariat, Awolowo, Obasa and Sanusi
Ward 11	Samonda, Polytechnic, and University of Ibadan area
Ward 12	Agbowo, Bodija Market, Ojurin, Barika and Iso Pako, Lagos Ibadan Express road.

Ibadan North Local Government is one of the Local Government in Oyo state and was created by the federal military of Nigeria on 27th September, 1991. This Local Government was carved out of the defunct Ibadan Municipal Government along with others. The components of the Local Government cover area between Beere roundabout through Oke-Are to Mokola, Oke itunu and Ijokodo. The other components are areas from Beere roundabout to Gate, Idi-Ape to Bashorun and up to Lagos/Ibadan expressway, Secretariat, Bodija, University of Ibadan and Agbowo areas The Secretariat of the Local Government is presently and tempomrily accoinmodated at Quarter 87 at Government reserved area at Agodi but the headquarters of the Local Government is Bodija. Ibadan North Local Government is bounded by other Local Governments. In the North. it is bounded by Akinyele Local Government Council. In the West by Ido Local Government Council and bounded in the East by Ibadan North East and Lagelu Local Government areas respectively

Ibadan North Local Government Council Area has a population of 306,364 people. The male made up of 152,608 people while the female population was 153,756 people (National Population Commission, 2006). The Local Government consists of Multi-Ethnic nationalities such as the igbos, Edos, the Urhobos, Itsekiries, Ijaws, Hausas and the Fulanis and foreigners who are from Europe, America, Asia, and other parts of the world but predominantly dominated by the Yorubas. Majority of the population of Ibadan North Local Government are in private sector. They are mainly traders and Artisans. A good number of their workers are civil servants who predominantly live around Badija Estate, agbowo, Sango, Mokola, the University of Ibadan and the Polytechnic Ibadan. There are six major markets in the local government council; they are Bodija market, Sango, Mokola, Sabongeri market, Gege and Ijokodo/Gbaremu Markets. Thousands of people patronize these markets on daily basis irrespective of their local Government origin, Some people (traders) travel from outside Ibadan and other states to buy and sell in these markets (Oyo state government websites).

There are sixteen private health facilities, seventeen local health facilities, one state health facility and federal facility offering contraceptive services to women within the local government area.

The local government can be further stratified into three segments:

1. **Inner core community type**: This can be described as a geographical area located at the central or innermost parts of a city and lies within an area of key economic activity and particularly associated with social problems such as inadequate housing and poor environmental hygiene, and high levels of crime and unemployment. In this study, the communities considered to have fallen within the inner core are: Beere, Kannike, Agbadugbudu, Oke-Are, Odo-Oye, Ode-Oolo, Inalende, Oniyanrin and Oke Oloro, Adeoyo, Yemetu, Oke-Arerno, and Isale-Alfa. Others are Ilu-taba, Idi-omo, Oje-Igosun, Kube, Oke- Apon, Abenla, Aliwo/Total Garden and NTA area.

2. Transitional community type: This is a community type or geographical area undergoing process of change in term of housing and infrastructural development but with less social problems. The following are the areas covered: Subo area, Oke Itunu, Coca-cola, and Oremeji area. Others area: Sango and Ijokoko area, Agbowo, Bodija market, Oju-irin, Barika and Iso Pako, Lagos/Ibadan express road.

3. **Peripheral community type:** This is a community type or geographic area which lies just outside an area of key economic activity. It is usually a new residential area bordering city or large town and with marked layouts, streets and linked access roads. In this study, the Akingbola, Ikolaba, and Gate, Mokola, Ago Tapa and Premier Hotel area, Bodija, Secretarial, Awolowo, Obasa and Sanusi, Samonda, Polytechnic and University of Ibadan area.

Study population

The study population was a group of individual married women in various trade and occupation residing within Ibadan North Local Government Area. Four hundred and sixteen respondents participated in the study.

Study Variables

In order to determine the study variables, a number of variables were identified. These variables were segregated to dependent and independent, for easy analysis.

The independent variables are the presumed causal factors. the variables that are been manipulated in the study. The independent variable in the study were factors that could make one to use or discontinue the use of oral contraceptives which might include the socio. demographic characteristic of the study population such as Age. Occupation. Level of education. Religion. Number of children and Ethnicity.

The dependent variables are the presumed effects or consequences of the manipulation of the independent. In this study. the dependent variables were Attitude. Knowledge of oral contraceptive use, and Acceptance of oral contraceptive pills.

Eligibility criteria and Inclusion Criteriu

Participants included in the study were females that had been married once and had one time used or are currently using oral contraceptive pill and at the time of the study, was a resident within the local government area.

Married women who had never used OCP before were excluded from the study. Also, participant who were unwilling or unavailable to be part of the study were excluded from the study.

Sampling Procedure and Size

The sample size was determined using sample size formula for estimating single proportions using the EPI INFO Statistical Package 6.04.

Size of the population 58785 (58.785)

Desired Precision 0.05

Expected Proportion of women on OC but changed to other methods = 87.9% (Abasiattai et al 2011)

Confidence level 95%

Sample size 378

Adjusting for 10% non-response rate gives a ininimum sample size of 416.

Sampling Technique

In order to select respondents for the questionnaire administration, a multi-stage sampling technique was used. Firstly, all wards within the local government were divided into three (Inner core, Transitional, and Peripheral community types) segments depending on the nature of the

communities in each segment, 416 married women in 6 of the twelve wards in the LGA were selected by 3 stages. The steps followed were:

1. The first stage was the random selection of six wards out of twelve wards through balloting (which is 50% of the total number of wards in the local council area).
2. The second stage was the selection by simple randomization (through balloting) a certain number of communities in each randomly selected ward which was used as a sample frame. (Since each ward is made up of several numbers of communities and all of them could not be selected).
3. The third stage was the final selection by simple randomization certain number of respondents (married women) from each ward, based on the size and number of communities relative to ward (see Table 3.4 for details).

Table 3.1: Stratification into community

Community Type	Wards Covered
1. Inner Core communities	1,2,3 and 4
2. Transitional communities	6,7,8 and 12
3. Peripheral communities	5, 9,10 and 11

Table 3.2: Detailed information on 'stratification' into community types

Community type	Wards covered	Areas/Communities covered
Inner Core community	Ward 1 Ward 2 Ward 3 Ward 4	Beere, Kannike, Agbadagbudu, Oke-Are, Odo-Oye Ode-Oolo, Inalende, Oniyanrin and Oke Oloro Adeoyo, Yemetu, OKe-Aremo, and Isale-Alfa Itu taba, Idi-Omo, Oje-Igosun, Kube, Oke-Apon, Abenla, Aliwo/Total Garden and NTA area
Transitional community type	Ward 6 Ward 7 Ward 8 Ward 12	Only one large community Sabo Area Oke-Itunu, Coca-cola, and Oremeji area Sango and Ijokodo area Agbowo, Bodija Market, Oja Irin, Barika and Iso-Pako, Lagos/Ibadan Express road
Peripheral community	Ward 5 Ward 9 Ward 10 Ward 11	Dashorun, Oluwo, Ashi, Akingbola, Ikolaba and Gate Mokola, Ago Tapa and Premier Hotel area Bodija, Secretariat, Awolowo, Obasa and Sanusi Samonda, Polytecnic, and University of Ibadan area

Two wards were randomly selected (Two wards from 'Inner Core', two wards from 'Transitional' and two wards were selected from 'Peripheral community type') using balloting from each of the community type to make a total of six wards in all

Table 3.3: Numbers of communities randomly selected through balloting

S/N	Community Type	Randomly selected wards	No. of communities in each ward	No. of communities randomly selected
1.	Inner- core community	Ward 2	4	2
2.		Ward 3	4	2
3.	Transitional community	Ward 8	2	1
4.		Ward 12	6	3
5.	Peripheral Community	Ward 9	3	2
6.		Ward 11	3	2
Total			22	12

The above table (T 3.3) shows the total number of communities in each of the randomly selected wards and the number of the communities eventually selected by simple randomization through balloting. A total of 416 women were selected from the communities by randomization (based on the size and numbers of communities relative to each ward) through balloting. For instance, in each selected community, sixty-nine (69) married women were randomly selected, except in Ward 8 where thirty-five (35) married women were. Hence, in each ward where two (2) communities have been randomly selected one hundred and thirty-eight (138) married women were randomly selected, except in Ward where 105 married women were selected randomly because three (3) communities were randomly selected there (see Table 3.4 below).

Table 3.4: Numbers of communities selected and number of respondents finally selected

S/N	Community Type	Randomly selected wards (6)	No. of communities in each ward	No. of communities randomly selected	No of respondents selected(based on size and number of communities selected from each ward)
1.	Inner- core	Ward 2	4	2	69
		Ward 3	4	2	69
2.	Transitional community	Ward 8	2	1(large community)	35
		Ward 12	6	3	105
3.	Peripheral Community	Ward 9	3	2	69
		Ward 11	3	2	69
		Grand Total	22	12	416 respondents

Method and Instrument for Data Collection

A semi-structured interviewer administered questionnaire which included a 15-point knowledge scale and a 12- point attitude scale was developed for the study. The instrument was designed after a thorough review of literature and extracting pertinent variables relating to factors affecting oral contraceptive use and discontinuation from standardized instruments such as the NDHS questionnaire. It also received input from experts in the area of contraceptives. The questionnaire was organized into six sections labeled A-F (see Appendix I). Section A sought information on respondents' age, religious affiliation, tribe, educational status, number of living children and other demographic information while section B questions were centered on prevalence of oral contraceptives use among married women. Section C sought information on acceptance of oral contraceptives while section D explored the knowledge of respondents on oral contraceptives. Section E questions were on attitude of respondents on family planning in general while the section F questions were on the factors influencing the discontinuation pattern of oral contraceptives.

Validity of the Study

To ensure the validity of the instruments in terms of expected measures, contents strength and accuracy, the draft of the questionnaire was developed based on the objectives of the study. It was designed based on literature review then subjected to review by my supervisor. Thereafter, the draft questionnaire was subjected to peer's review, pretested and modified.

Reliability of the Study

In order to determine the reliability of the instruments, a pre-test was conducted among married women in Wofun -Olodo community, Lagelu local government area of Oyo State. The pilot study was conducted in order to know if the respondents had the ability to understand the question items in the questionnaire: content understanding and appropriateness, adequacy to measure the aims and objectives of the study and the analysis procedure for the actual survey.

The pretested questionnaires were cleaned, coded and entered into the computer system. The reliability of the questionnaire was determined using the Cronbach Alpha technique of the Statistical Package for Social Sciences (SPSS) to determine the reliability co-efficient of the questionnaire. According to this approach, a result showing correlation coefficient equal to or greater than 0.5 is said to be reliable. The result from the analysis of the data collected during the pre-test showed reliability co-efficient of 0.79 that the instrument is reliable before the main data collection.

Few revisions were made on the instruments before they were finally put to use among married women in Ibadan North local government. Revisions included: the substitution of a science oriented word to an English word but still with the retention of its meaning for better understanding of the study participants, as well as skipping mechanism were also included in the questionnaire.

Data Collection Procedure

The data were collected using the semi-structured questionnaire (see Appendix I) with the help of three trained field assistants. The questionnaire was interviewer-administered questionnaire. A total of 416 questionnaires were given out and 416 valid questionnaires were also retrieved.

Three field assistants were recruited and trained both for the pilot and for the main survey. The training focused on the objectives and importance of the study, the sampling processes, how to administer the study instruments, how to secure respondents' informed consent and general interviewing skills. The study instrument was discussed in detail during the training and the field assistants became familiar with it by conducting role-plays with each other. The field assistants were involved in the pretest of the study instruments and this created opportunity for them to learn how to collect the required data. The pretest was also an opportunity for them to practice how they would go about collecting the data. while the researcher watched to see how the exercise was being done and to make necessary correction(s).

The questionnaires were administered at various communities that were chosen from the sampling procedure within the local government between the hours of 9: 00am and 4:30pm for 2 weeks. Consent of the participants was sought before the administration of the questionnaire after explaining to them the purpose of the research, time that would be spent, and the benefits of the research. The respondents were asked if they would like to ask questions and their questions were answered by the researcher before the instrument would be completed. After a field assistant, had collected a questionnaire from a respondent, she checked for completeness of the questionnaire. Attention of a respondent was drawn to cases of omissions or incomplete responses in her questionnaire.

Data Management and Analysis

After administering the interviewer-administered questionnaire, manual editing was carried out to ascertain completeness, consistency, accuracy and uniformity. Serial number was writing on the questionnaire for easy identification and recall of any instrument with problems A coding guide was developed with which the researcher used to organize open-ended responses into numerical values that aided their tabulation and analysis. The responses from the questionnaires were then entered into the computer and analyzed using Statistical Package for Social Scientist (SPSS). Frequencies, percentages and tables were generated.

The analysis was done using descriptive i.e mean, median and mode and influential chi-square statistical analysis. In order to determine the true knowledge and attitude of the respondents

based on the responses to the question items, a scoring mechanism was adopted. The correct information given to the question items by the respondents attract certain scores that were used in compiling the respondents' knowledge and attitude on oral contraceptives.

In addition, findings from this analysis were the bases upon which the discussions were made. The statistical chi square (x^2) test was used to elicit the probabilities and chances of occurrence of differences in the variables. The statistical test was carried out on a 95% confidence level and statistically insignificant values were excluded to ensure true results were obtained. The questionnaires were stored in a place safe from destruction of water or fire or where un authorized person will not have access to them after analysis.

Ethical Consideration

Prior to the commencement of the study, ethical approval was obtained from the Oyo State Ethical review committee. The committee helped to ensure that the research work conforms to the generally accepted scientific principles and international ethical guideline required in human subject's research. (see Appendix II for the letter of approval). Oyo State Ethical review committee ensured the safety, dignity, rights and well-being of the potential research participants by providing an independent, competent and timely review of both the ethics and science of the study before it was carried out. They monitor the implementation of the study to ensure that the project was carried out ethically through the project supervisor. During the review, the ethics committee ensured that the following ethical principles were taking care of in the research protocol

Respect for Persons

One of the ways the principle of respect for persons was put into the practice was in the execution of inform consent. Informed consent of the research participants was gotten by giving the participants adequate information concerning the study which included the focus of the study, objectives of the study, study methodology, inconveniences that might be experienced and the potential benefits of the study to society.

During the data collection process, the participants of this study were provided with ample opportunity to consider all options and ask questions related to the study. The participation in the study was made voluntary and the researcher also ensured that the participants understood the given information about the research and obtained their agreement to participant in the study without undue influence or coercion. The participants' consents were document through an informed consent form attached to the instrument used for the study and the volunteers were asked to append their signatures or thumb print after they have received adequate information about the study and were ready to be part of the study.

Beneficence to Participants

Beneficence deals with the responsibility of researchers to maximize benefits and minimize harm and risks to persons who participate in the research, therefore, in this study, the principal investigator conducted both potential benefits and potential risk that could be involved in the research before its implementation. The research protocol demonstrated the immediate, intermediate and ultimate benefits of the proposed investigation to the full understanding and acceptance of both the ethical review boards and the research subjects. The research is of benefit to the society. The findings from this study could be used for appropriate behavioural change intervention about oral contraceptive discontinuation.

The principle of beneficence was also demonstrated by the qualification of the principal investigator and his supervisor. The qualifications of the supervisor of this study showed and convinced the ethic committee that the researchers are competent and capable to carry out the study and safeguard the welfare of persons who would participate in the study. The study did not in any way put the participants in danger because during the research, there was no collection of invasive materials and the participants were free to decide not to answer a particular question if they were not comfortable with the question.

Justice

In this study, the research participants were never selected because of race, ease of access, or their compromised positions and recruited participants were given equal opportunities to withdraw their consent freely during the study. The study included diverse elements of the

population. This was done through the application of scientific sampling technique in the identification and selection of research participants. The participation in the research granted the participants the basic rights to the benefits of the study. This study is responsive to the needs who participated in the study and the recommendation given from the study outputs relates well to the study community.

Confidentiality

Confidentiality of each participant was maximally maintained during and after the collection of his or her data or information. During the study, the researcher was saddled with the responsibility of preserving the confidentiality of information received and anonymity of respondents. This was employed in the design and construction of the research instrument, as a result, the instrument lacks any personal identifier such as name of participants or their addresses. This is important to make the information given by each respondent as confidential as possible.

Also, during the data collection, the participants were informed of the procedures necessary to make keep their identity and information confidential. This was done to allay fear and anxiety about the information given during the research. The research assistants used for data collection were trustworthy and were known to the principal investigator in their attitude and ability to collect the right information from the participants. Information gathered from the respondent was stored in the computer package for analysis by the principal investigator and access was never granted to unauthorized person.

Limitation of the Study

Participants may not give valid information about their contraceptive use. Also, there is a potential for recall bias as the women may not remember accurately their contraceptive use. The researcher tried to limit these biases by using check questions to confirm the period of their OC use

CHAPTER FOUR

RESULTS

4.1 Respondents' Socio-demographic characteristics

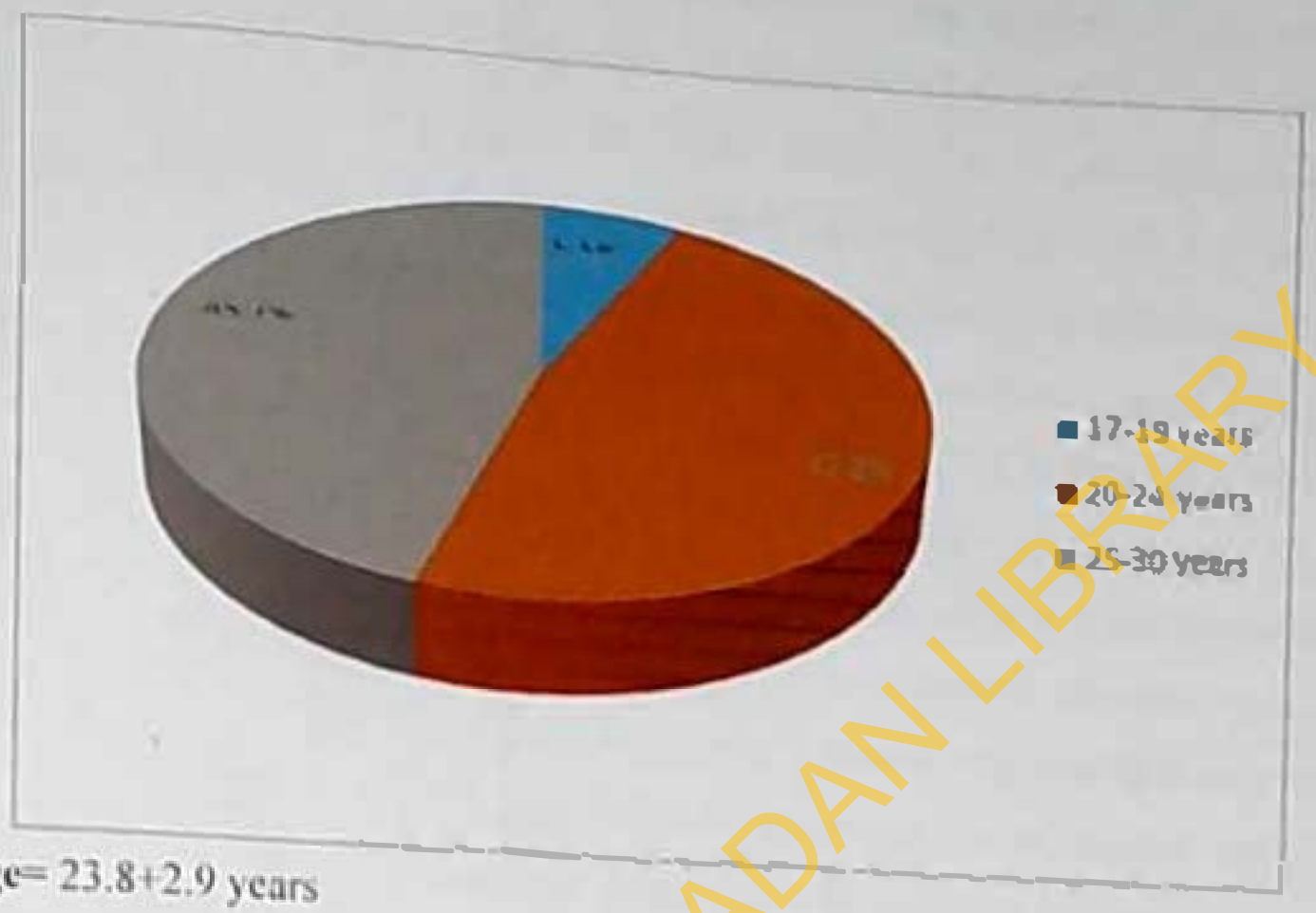
Table 4.1 shows the basic socio-demographic characteristics of the respondents. All the 416 respondents were female of reproductive age. The majority of respondents has had some education, however, 3.8 percent of the respondents have never attended school. 11.3 percent of the respondents have attained primary education only, while 58.2 percent of women have attended secondary school and 26.7 percent have attained tertiary education. About 46 percent of all respondents are Muslim and 53.6 percent of respondents are Christian. The ethnic composition of the sample indicates that most respondents are Yoruba (80%), 13.7 percent are Igbo and Hausa (2.6%). Other ethnic groups constitute 3.6 percent of the respondents that included Egbira, Ishekiri and Edo. Majority of the respondents (94%) were currently married. Majority (86.5%) were from monogamous family and majority (92.8%) were working. The ages of respondents ranged from 19 – 56 years with a mean age of 33.6±7.8 years. About 7% of the respondents were unemployed at the time of the study and the major occupation of the respondents who were gainfully employed was trading (61.9%).

Table 4.1: Respondents socio- demographic information

Characteristics	(N=416)	
	Frequency	Frequency (%)
Secondary education	242	58.2
Tertiary education	111	26.7
Primary education	47	11.3
No formal Education	16	3.8
Religion		
Christianity	223	53.6
Islam	193	46.4
Ethnicity		
Yoruba	333	80.0
Igbo	57	13.7
Hausa	11	2.6
Edo	8	1.9
Egbira	5	1.2
Ishekiri	2	.5
Respondents Age		
Less than or equal to 25	34	8.2
More than 25	382	91.8
Age (in years)*		
Current Marital Status		
Married	392	94.2
Divorced	16	3.8
Widowed	8	1.9
Family Type		
Monogamy	352	86.5
Polygamous	55	13.5
Are you working		
Yes	386	92.8
No	30	7.2
Occupation (N = 386)		
Trading	239	61.9
Teaching	34	8.8
Fashion Designing	33	8.5
Civil Servant	29	7.5
Hairdressing	28	7.3
Banking	8	2.1
Photography	7	1.8
Catering	5	1.3
Accounting	3	.8
Respondent monthly income		
Income from all sources (in naira)*, Ave income = 27734.58±27353.9;		
Number of children		
Number of male: Mean = 1.7; Number of female; mean = 1.4		

*mean age = 35.6±7.8

*mean age = 35.6±7.8



Mean age= 23.8±2.9 years

Range: 17 – 30 yeals

Figure 4.1: Respondents age distribution

4.2 Knowledge of respondents on oral contraceptives Use

The sources of OC and knowledge on the brand of OC known by respondents were presented in Table 4.2. Health workers (38.8%) were more common source of information on OC, followed by friends (29.6%), and television (16.5%). Radio was the least (15.1%) sources of information on OC. The most common brand known by the respondents was combination3 (28.2%) followed by Duofem (21.3%) and Confidence (19.4%). The least known brand of OC was Eslution (3.7%) and 'Apoil and Stil' (1.1%). The proportion of respondents with good and poor knowledge scores relating to oral contraceptives are shown on figure 4.2. More than a quarter (28.1%) of the respondents had poor knowledge. Respondents had a mean knowledge score of 14.0 ± 1.1 (see Figure 4.2 for details). In Table 4.3, further analysis of the questions on knowledge revealed that all the respondents (100%) know that the use of oral contraceptives prevents unwanted pregnancy. However, 10.1% of the women thought that oral contraceptives can only be used by married women. About a half (44.7%) of the women didn't know that oral contraceptives can be used after abortion. Only 79.6% of the women know that oral contraceptives delay ovulation.

Table 4.3 shows respondents' knowledge of oral contraceptive by selected socio-demographic characteristics. The selected characteristics were age, level of education, marital status, and religion. The proportion of respondents with good knowledge scores increase with increase in age. Proportion of respondents with good knowledge among those aged ≤25 and >25 years were 60.0% and 72.7% respectively. Overall there was no significant difference between knowledge of oral contraceptive and age of respondents (See Table 4.5). More Christians (80.0%) than Muslims (62.4%) had good knowledge of oral contraceptive. There was a significant relationship between knowledge of oral contraceptive and respondents' religion

As shown on Table 4.4, Headache (23.1%) had the highest proportions among the side effects of oral contraceptive mentioned by the respondents, followed by weight gain (20.9%) and irregular menses (19.5%). Table 4.4 shows respondents' knowledge of side effects of oral contraceptives. Headache (23.10%), weight gain (20.90%) and irregular menses (19.50%) top the list of side effect as given by the respondents (See Figure 4.4). The proportion of those who were divorced (75.0%) was higher than those who were currently married (72.2%) which in turn was higher than those who were widowed (37.5%). Overall there was no significant relationship between knowledge of oral contraceptive and respondents' marital status (See Table 4.5).

Table 4.2: Sources of OC and knowledge of respondents on brand of OC

(N= 416)

Characteristics	Frequency	Frequency (%)
*Sources of information on Oral Contraceptive		
Health worker	277	38.8
Friend	211	29.6
Television	118	16.5
Radio	108	15.1
Oral Contraceptive brands mentioned by respondents		
Combination3	386	28.2%
Duofem	292	21.3%
Conlidence	266	19.4%
Mycrobynon	154	11.3%
Lo-femenal	122	8.9%
Neogynon	96	7.0%
Eslution	50	3.7%
Apoil and stil	2	.1%

Table 4.3: Knowledge of Respondents on Oral Contraceptive

(N= 416)

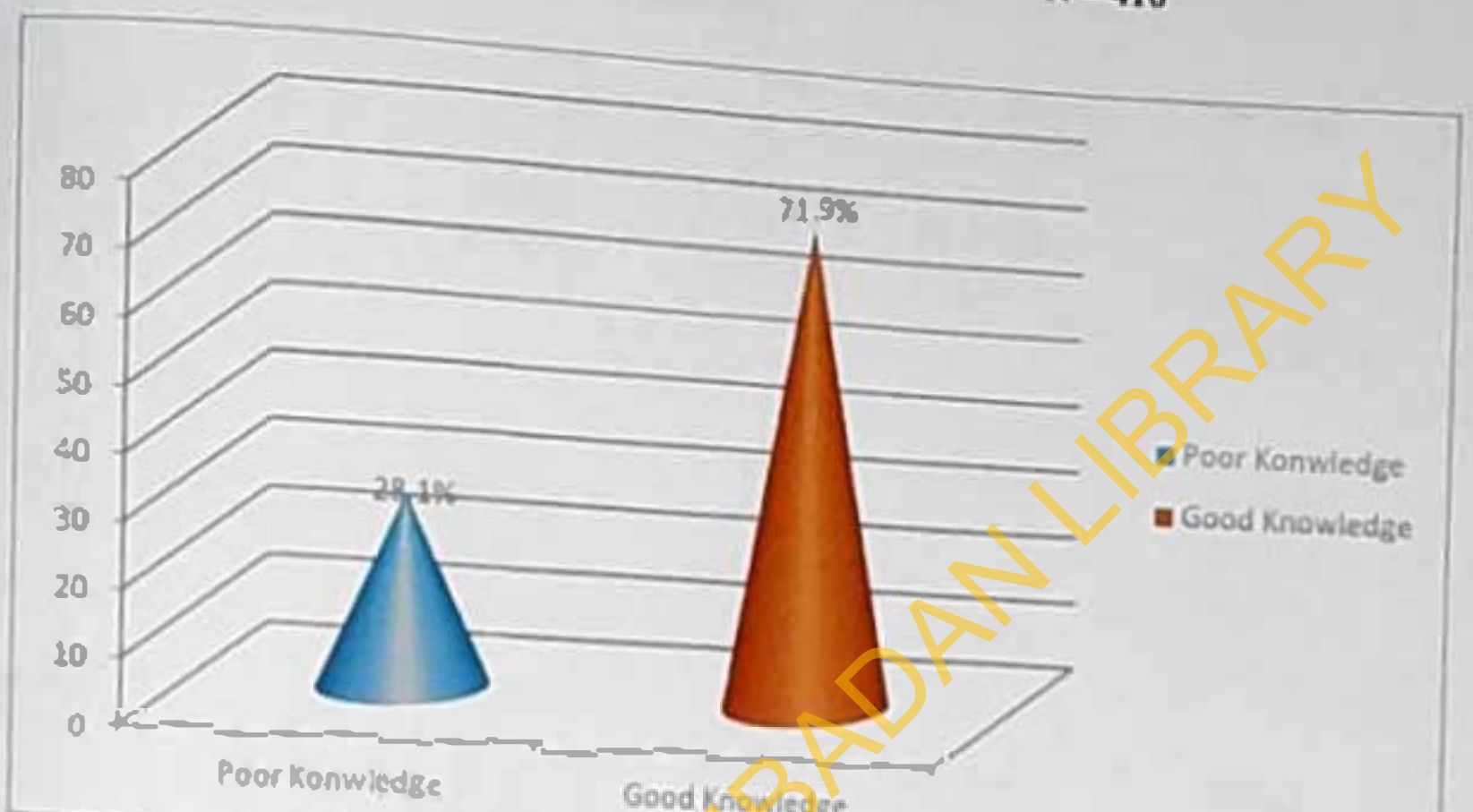
Knowledge related to Oral Contraceptives	Pattern of Response		
	Yes (%)	No (%)	Total
The use oral contraceptives prevent unwanted pregnancy	416(100.0)	0(0.0)	416
Oral contraceptives is the only form of contraceptives	1(0.2)	415(99.8)	416
Oral contraceptives can only be used by married women	42 (10.1)	374(89.1)	416
Oral contraceptives prevent sexually transmitted infections	12 (2.8)	404(97.1)	416
Oral contraceptives cannot be used with any other form of contraceptives	380(91.3)	36 (8.7)	416
Oral contraceptives cannot be used after an abortion or miscarriage	186(44.7)	230(55.3)	416
Oral contraceptives delay ovulation	85(20.4)	331(79.6)	416
Long term use of oral contraceptives decrease female fertility	36(8.7)	380(91.3)	416
Long term use of oral contraceptives can cause ovarian cancer	20(4.8)	396(95.2)	416
Oral contraceptives are not being taken daily	4(1.0)	412(99.0)	416
The use of contraceptives method will interfere sexual intercourse	10(2.4)	406(97.6)	416

Table 4.4: Respondents' Knowledge of Side Effects of Oral Contraceptive

Characteristics		
*Side Effects of Oral Contraceptive	Frequency	(%)
Headache	213	51.2
Weight gain	193	46.4
Irregular menses	180	43.3
Visual change	121	29.1
Causes harms to womb	43	10.3
Moodiness	54	12.9
Facial Pimples	42	10.1
Tender breast	24	5.8
No sexual satisfaction	19	4.6
Dizziness	16	3.8
Causes body weakness	11	2.6
Itching	3	0.7
I use to forget to use it	2	0.5
It causes cancer	1	0.2

*Multiple response present

N = 416



*Key

Knowledge scores of ≥11 and <11 were rated as good and poor respectively

Good knowledge (10-13) = 246

Poor Knowledge (11 - 15 points) = 96

Mean knowledge score = 14.0 ±1.1

Figure 4.2: knowledge of respondents on oral contraceptives

Table 4.5: knowledge of Oral Contraceptive by selected demographic characteristics

N = 416

Variables	Level of knowledge			
	Good N (%)	Poor N (%)	Total N (%)	P value
Age (in years)				
Less than or equal to 25	12(60.0)	8(40.0)	20(100.0)	$X^2 = 1.9$
More than 25	234(72.7)	88(27.3)	322(100.0)	P = 0.2
				P>0.05
Level of Education				
No Education	8(61.5)	5(38.5)	13(100.0)	
Primary Education	29(74.4)	10(25.6)	39(100.0)	$X^2 = 4.6$
Secondary Education	138(68.7)	63(31.3)	201(100.0	P = 0. 2
Tertiary Education	79(79.8)	18(20.2)	89(100.0)	P>0.05
Marital Status				
Divorced	9 (75.0)	3 (250)	12 (100.0)	
Widowed	3 (37.5)	5(62.5)	8 (100.0)	$X^2 = 4.8$
Married	234(72.2)	88(27.3)	322 (100.0)	P= 0.09
				P>0.05
Religion				
Christian	148 (80.0)	37(20.0)	185 (100.0)	$X^2 = 13.0$
Islam	98(62.4)	62(37.6)	157 (100.0)	P = 0.00
				P<0.05

4.3 Prevalence of Use and Discontinuation of Oral Contraceptive

Table 4.6 presents the prevalence of oral contraceptives among respondents. A total of 124 (29.8%) respondents were currently using oral contraceptive at the time of this study. Among the brand of oral contraceptives currently being used, the Combination3 oral contraceptive ranked the highest (55.6%). Other contraceptives mentioned were Duofem (26.6%), Confidence (11.3%), Mycrobynon (4.0), and Neogynon (2.4%). Respondents who have used oral contraceptives before were asked the brand they have used before, about 42.4% of the respondents used Combination3. This was followed by confidence (24.7%), Duofem (22.1%) and Lo-femenal (4.4%). Other brands mentioned in less than 2% of the total proportion by the respondents were Neogynon, Mycrobynon, Eslulon and Apoil and Still. The mean age at which respondents first used oral contraceptive was 27.4 years.

The prevalence of oral contraceptives by selected demographic characteristics was presented in Table 4.7. The selected characteristics were education, employment status, religion, and respondent age when they married. The prevalence of oral contraceptives among the respondents increases with increase in the level of education but overall, there was no significant relationship between respondents' level of education and the prevalence of oral contraceptive among the respondents (See table 4.7). Respondents who were currently not employed have a higher contraceptive use (43.3%) compared to respondents who were currently working (28.8%). Overall, there was no relationship between employment status and prevalence of oral contraceptive. Significantly higher proportion (36.8%) of Muslim respondents than Christians respondents (23.8%) were currently using oral contraceptives. The prevalence of oral contraceptives decreased with increase in age. From Table 4.7, the oral contraceptive use was 63.3% for respondents who married between '17 to 19' years of age, 32.2% for respondents who married within '20 to 24' years and 22.6% for respondents who married when they were 25 years or more. Overall, the relationship between age of respondents when they got married and the prevalence of oral contraceptive was significant.

Table 4.8 contains the prevalence of oral contraceptives by some selected non-demographic factors. These factors were Knowledge of OC, Distance to Health Facility, and Cost of OC used. The prevalence of oral contraceptive used higher among respondents with poor knowledge of

OC (33.4%) compared with respondents with good knowledge (28.0%). Overall, there was relationship between respondent's knowledge of OC and the prevalence of oral contraceptive was significant. Higher proportion of respondents who got their OC free (36.3%) than those who paid (23.4%) were currently using OC. Overall, there was a significant relationship between cost of oral contraceptive and its prevalence among the respondents (see details in Table 4.8).

Table 4.6: Prevalence of Use and Discontinuation of Oral Contraceptives

Characteristics	(N= 416)	
	Frequency	(%)
Those who were using oral contraceptives currently		
No	292	70.2
Yes	124	29.8
The Oral contraceptive respondents were using currently(n = 124)		
Combination3		
Duofem	69	55.6
Confidence	33	26.6
Mycrobynon	14	11.3
Neogynon	5	4.0
The Oral contraceptive respondents have used before (n = 344)	3	2.4
Combination 3		
Confidence	146	42.4
Duofem	85	24.7
Lo-femenal	76	22.1
Mycrobynon	15	4.4
Neogynon	10	2.9
Esluton	7	2.0
Apoil and Still	3	0.9
	2	0.6
Age when respondents first used oral contraceptive (in years)		
mean age = 27.37±3.8; min=18, max = 38		
The Last time Respondent used oral contraceptive N=285		
one year and more	257	90.2
More than a month but less than a year	26	9.1
within a month	2	.7

Table 4.7: Prevalence of Oral Contraceptives by selected demographic characteristics

Variables	Prevalence of Oral Contraceptives			N = 416
	Yes (%)	No (%)	Total	P value
Education				
No formal schooling	3 (18.8)	13 (81.3)	16	X^2 = 1.72
Primary Education	13 (27.7)	34 (72.3)	47	P= 0.63
Secondary Education	71 (29.3)	171(70.7)	242	P>0.05
Tertiary Education	37(33.3)	74(66.7)	111	
Employment Status				
Currently Working	111 (28.8)	275 (71.2)	155	X^2 = 2.8
Not working	13(43.3)	17 (56.7)	76	P = 0.09
				P>0.05
Religion				
Christianity	53 (23.8)	170 (76.2)	223	X^2= 8.38
Islam	71 (36.8)	122 (63.2)	192	P = 0.04
				P< 0.05
Age Married (years)				
17-19	17(63.0)	10 (37.0)	27	X^2= 19.39
20-24	64(32.2)	135 (67.8)	199	P = 0.00
25-30	43(22.6)	147 (77.4)	190	P< 0.05

Table 4.8: Prevalence of oral contraceptives by selected non-demographic characteristics

Variables	Prevalence of Oral Contraceptives			
	Yes (%)	No (%)	Total	P value
Knowledge of OC				$X^2 = 1.32$
Good Knowledge	69 (28.0)	177 (72.0)	246	P = 0.2
Poor Knowledge	33 (34.4)	63 (65.6)	96	P > 0.05
Distance to Health Facility				
Very close	40(25.2)	119(74.8)	159	$X^2 = 2.88$
Very Far	47(31.5)	102(68.5)	108	P = 0.21
Not too Close	37(34.3)	71(65.7)	149	P > 0.05
Cost of OC				
Free	74(36.3)	130(63.7)	204	$X^2 = 8.001$
Paid	50(23.4)	162(76.1)	212	P = 0.05

4.4 Acceptance of Oral Contraceptives

Table 4.9a and Table 4.9b provide an overview of respondents' acceptance of oral contraceptives. In Table 4.9a, the respondents were asked to mention the factors that influence their decision to use oral contraceptives: among the factors considered, "cost" ranked the highest (49.4%) followed by "sexual partner influence" (24.4%) and then by "distance to health facilities" (18.2%). other factors considered were influence by family members, attitude of health workers, lack of information, side effect of the pill after use, lack of supply, fear of health risk which all ranged between 5% and 1% (See details in Table 4.9a). More than half (58%) of the respondents were satisfied with the last brand of oral contraceptive used (see Figure 4.3). Reasons given for Satisfaction include 'it is effective' (83.9%), 'it has no side effects' (9.2%), 'it is cheap' (4.6%) 'always available to get' (1.8%), and 'easier to use' (0.5%) while the major reasons given for non-satisfaction of OC used include 'it gives me headache after use' (38.0%), 'Irregular menstruation' (19.3%), it makes one gain weight' (10.7%%) and 'I forget to use it sometimes' (8.0%), other reasons were listed in Table 4.9a. When the respondents were asked, who influenced them most on their chosen form of oral contraceptive friends ranked highest (32.3%), followed by healthcare providers (22.0%) while about 12.6% indicated that they were self-motivated. Clinics (44.1%) were the major source of oral contraceptives for respondents. Other sources were patent medicine vendor (37.3%), pharmaceutical store (13.9%), and private sector (4.6%) (see T.4.9b). Average cost of OC in naira was ₦49.00 while 49% of the respondent got their OC free of charge. More than a quarter of the respondents (38.2%) respondents reside near their sources of oral contraceptives.

Table 4.9a: Acceptance of Oral Contraceptives

Characteristics (N= 416)	Frequency	(%)
*Factors that Influence Respondent decision to use oral contraceptive		
Cost	302	49.4
Sexual Partner	149	24.4
Distance to health facilities	111	18.2
Family members	26	4.3
Fear of health risk	7	1.1
Attitude of health workers	5	.8
Side effect of the pill after use	5	.8
Lack of supply	3	.5
Lack of information	3	.5
Respondents' Satisfaction with the last oral contraceptive used (n = 357)		
Satisfied	207	58.0
Not Satisfied	150	42.0
*Reasons given for Satisfaction (n=218)		
It is effective	183	83.9
No side effects	20	9.2
It is cheap	10	4.6
Always available to get	4	1.8
Easier to use	1	.5
*Reasons given for None Satisfaction by Respondents (n=150)		
Headache	57	38.0
Irregular menstruation	29	19.3
Weight gain	16	10.7
I forget to use it sometimes	12	8.0
It itches me	9	6.0
Dizziness after use	8	5.3
It causes cancer	6	4.0
I don't like taking drugs tablet	5	3.3
Weight loss	3	2.0
I have irregular pregnancy	2	1.3
It causes pimples	2	1.3
It gives me rashes	1	.7

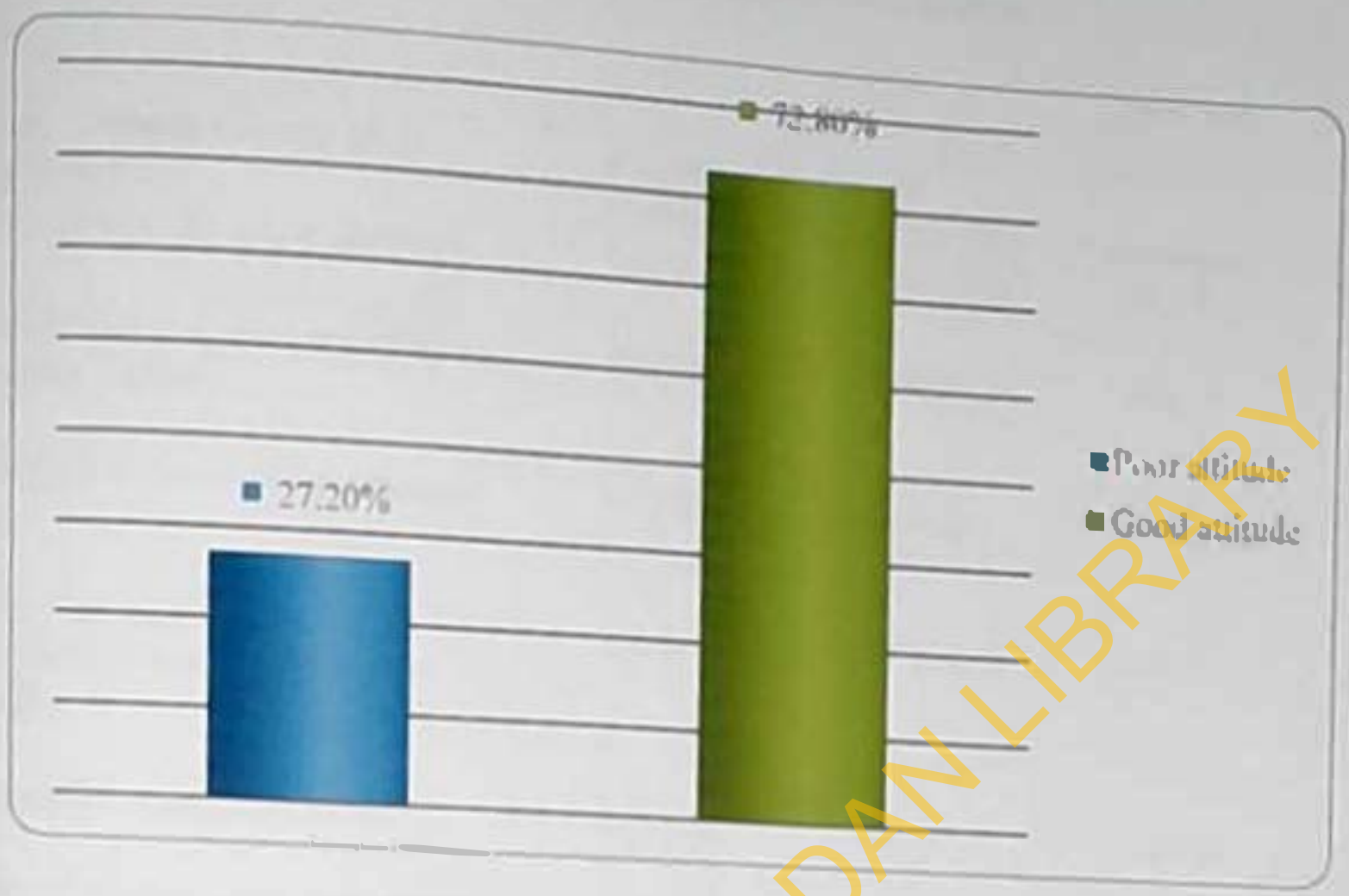
Table 4.9b: Acceptance of Oral Contraceptives

Characteristics	(N= 416) Frequency	(%)
People who influenced you most your chosen oral contraceptive(n = 405)		
My Friends	131	32.3
My healthcare providers	89	22.0
Nobody	71	17.5
My Husband	51	12.6
My Parents	28	6.9
My Neighbours	21	5.2
The Media	8	2.0
Relatives	6	1.5
Respondents Sources of Oral contraceptives(n = 410)		
Clinic	181	44.1
Patent Medicine Vendor	153	37.3
Pharmaceuticol store	57	13.9
Private sector	19	4.6
Cost of oral Contraceptive		
Cost (in naira)* Ave Cost=48.5±53.4; Min = 0(got for Free), max = 200		
Cost of OC in categories		
Free	204	49.0
Paid	212	51.0
Distance of Sources of Oral Contraceptive to Place of Residence		
Very close	159	38.2
Not too close	108	26.0
Far	149	35.8

4.5 Respondents attitude toward the use of oral contraceptives

The proportion of respondents with good and poor attitude scores relating to oral contraceptives is shown on Figure 4.5. More than a quarter (27.2%) of the respondents had poor attitude. Respondents had a mean attitude score of 9.1 ± 1.2 (see Figure 4.5).

Table 4.10 presents the responses of respondents on each question item under attitudes. Further analysis of the questions on attitude revealed that majority (90.6%) of the respondents agrees that Oral contraceptives can cause permanent barrenness. However, only 1.4% of the women agree that women who stop taking oral contraceptives may not be able to get pregnant again. About 11.9% of the respondents agreed that oral contraceptives can cause cancer in those who use it and 6.5% of the respondents agreed that oral contraceptives can cause birth defects or multiple births. Only 79.0% of the women disagree that the use of oral contraceptives can change their sexual behaviour. About 95.9% of the women agreed that oral contraceptives can increase intimacy between couples and more than a quarter (29.9%) of the women agreed that oral contraceptives encourage promiscuity. (See Table 4.10).



*Key
Attitude scores of >9 and <9 were rated as good attitude and poor attitude respectively
Good attitude (9-11) = 303
Poor attitude (2- 9 points) = 10
Mean knowledge score = 9.1 ±1.2

Figure: 4.3 Respondents' Attitude towards Oral Contraceptive

Table 4.10: Respondents Attitude toward the Use of Oral Contraceptives

Respondents Attitude toward Oral Contraceptives Use	Pattern of Response (N= 416)			
	Agree (%)	Disagree (%)	Undecided	Total
Oral contraceptives can cause abortion	4(1.0)	405(97.6)	6(1.4)	416
Oral contraceptives is against my religion or faith of some people	10(2.4)	404(97.3)	1(0.2)	415
Oral contraceptives can cause permanent barrenness	375(90.6)	39(9.4)	0(0.0)	414
Women who stop taking oral contraceptives may not be able to get pregnant again	6(1.4)	393(94.7)	16(3.9)	415
Oral contraceptives can cause cancer	49(11.9)	340(82.3)	24(5.8)	413
Oral contraceptives can cause birth defects or multiple births	27(6.5)	351(84.6)	37(8.9)	415
Use of oral contraceptives can change my sexual behavior	87(21.0)	328(79.0)	0(0.0)	415
Using oral contraceptives can increase intimacy between couples	397(95.9)	15(3.6)	2(.5)	414
Oral contraceptives allow women to regain strength before having another child	19(4.6)	390(94.0)	6(1.4)	415
It is proper for women to prevent pregnancy with oral contraceptives	402(96.6)	12(2.9)	2(0.5)	416
Oral contraceptives encourage promiscuity	124(29.9)	290(69.9)	1(0.2)	415
Proper and consistent use of oral contraceptives prevent unintended pregnancy	403(96.9)	12(2.9)	1(0.2)	416

Table 4.11 presents factors that influence the use and discontinuation of oral contraceptives. When the respondents were asked about the frequency of their sexual intercourse, less than half of the respondents (45.9%) indicated that they have sexual intercourse regularly, 39.7% have it occasionally and about 14% rarely indulge in sexual intercourse and only 78.5% indicated that their first pregnancy was planned. About 50% of the respondents still desire to have more children. Similarly, about 68% of the respondents have tried to stop the use of OC (See Figure 4.6). When the respondents were asked to list the factors that have allowed them to continue the use of OC, Protection from unwanted pregnancy (70.7%) topped the list, followed by Child spacing (26.7%) and No side effect on me (2.6%). Among the factors that has led to discontinuation of OC use. Side effect of the pill (51.6%) followed by missing pills (28.7%) topped the list. Other factors listed were distance to health facilities, opposition by sexual partner, side effect, cost, attitude of health workers, lack of information, and that it causes cancer which were less than 10% of the total response (see Figure 4.7). More than three-quarter (79.3%) of the respondents indicated that they have the intention of using OC again. When respondents were asked to indicate the current family planning method that they are using, condom (45.2%) followed by injections (30.3%) topped the list. (See Figure 4.6).

Table 4.11: Perceived factors that influence the use and discontinuation of oral contraceptives

Characteristics	Frequency	(%)
Ever tried to stop oral contraceptive use (n = 407)		
Yes	278	68.3
No	129	31.7
Factors that influence the continuation of oral contraceptive use (N=116)		
Protection from unwanted pregnancy	82	70.7
Child spacing	31	26.7
No side effect on me	3	2.6
Factors that led to oral contraceptive use discontinuation (N=383)		
Side effect	196	51.2
Missing pills	109	28.5
Opposition by Sexual Partner	25	6.5
Distance to health facilities	21	5.5
To have more children	20	5.2
Others (cost, attitude of health workers, lack of information, it causes cancer)	12	3.1
Intention on using oral contraceptive again (n = 299)		
No	237	79.3
Yes	62	20.7
If oral contraceptive was the first family planning used (n = 372)		
Yes	192	51.6
No	180	48.4
Other family planning methods that have been used(N=191)		

Condom		
Diaphragm	107	56.0
Injections	23	12.0
IUCD	21	11.0
Implanon	17	8.9
Cervical cap	11	5.8
Withdrawal	6	3.1
	6	3.1
Respondents Current family planning method(N=153)		
Condom		
Injections	70	45.7
Withdrawal	47	30.7
Implanon	21	13.7
IUCD	7	4.6
Diaphragm	3	1.9
Cervical cap	3	1.9
	2	1.3
Advantages of the current family planning method over oral contraceptive (N=157)		
Safe to use	66	42.0
Effective for me	26	16.6
No side effect	20	12.7
I don't forget to use it, it is implanted	20	12.7
It adds no weight to me	18	11.5
Easy to get	4	2.5
Cheaper	2	1.3
it takes longer period	1	.6

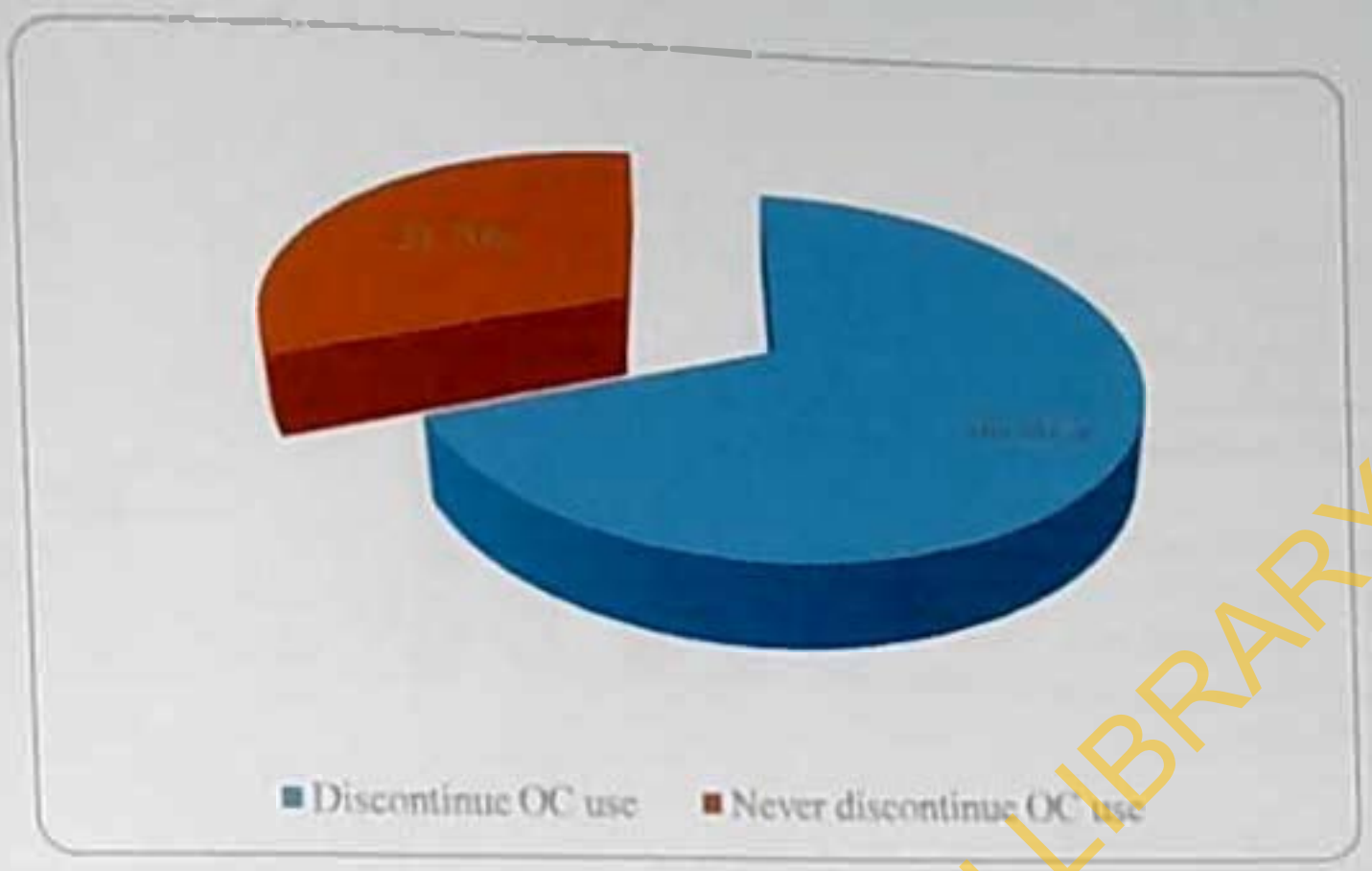


Figure 4.4: Percentage of respondents who had ever stopped the use of Oral contraceptives

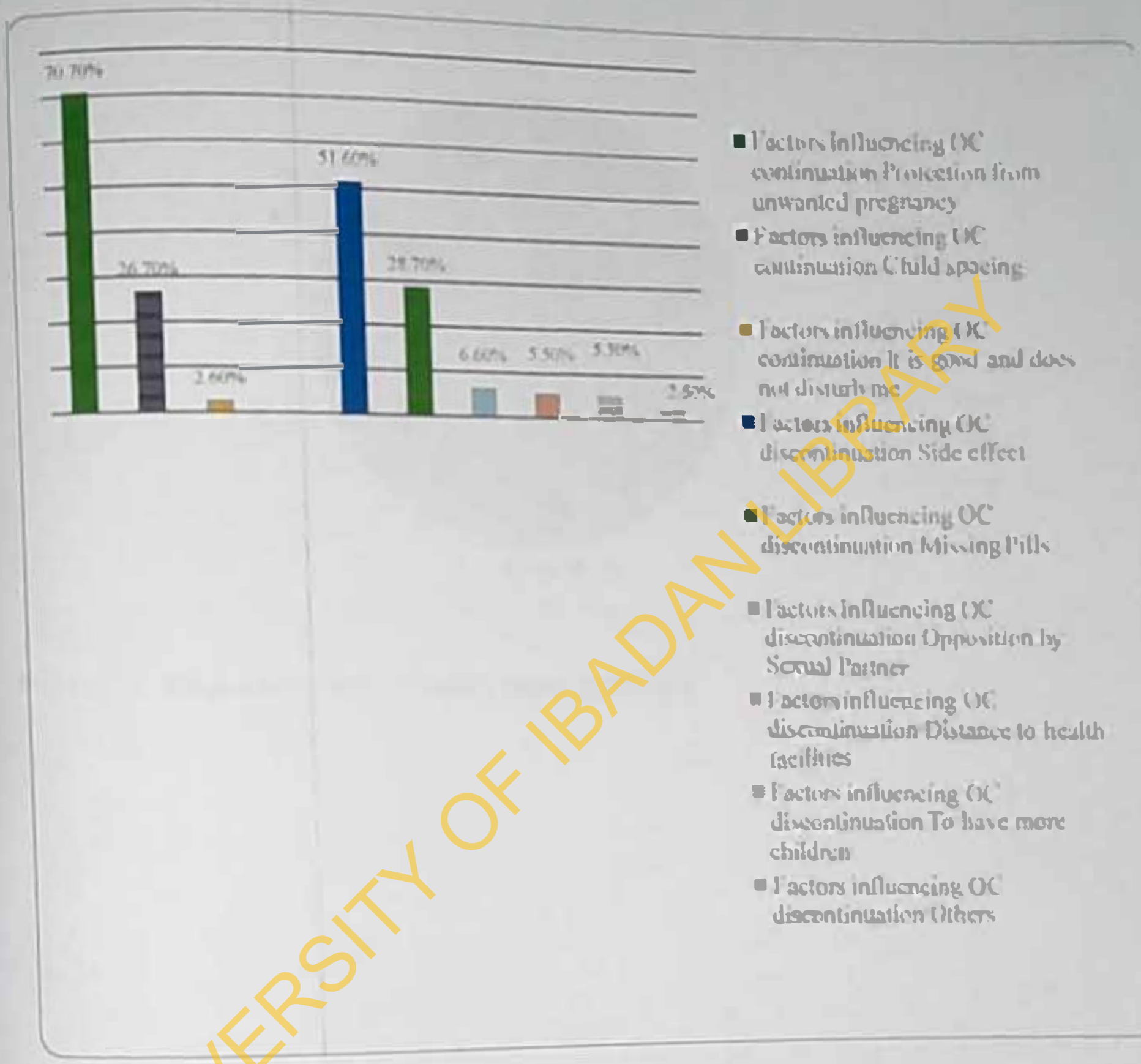


Figure 4.5: Perceived Factors that Influence the use and discontinuation of oral contraceptives

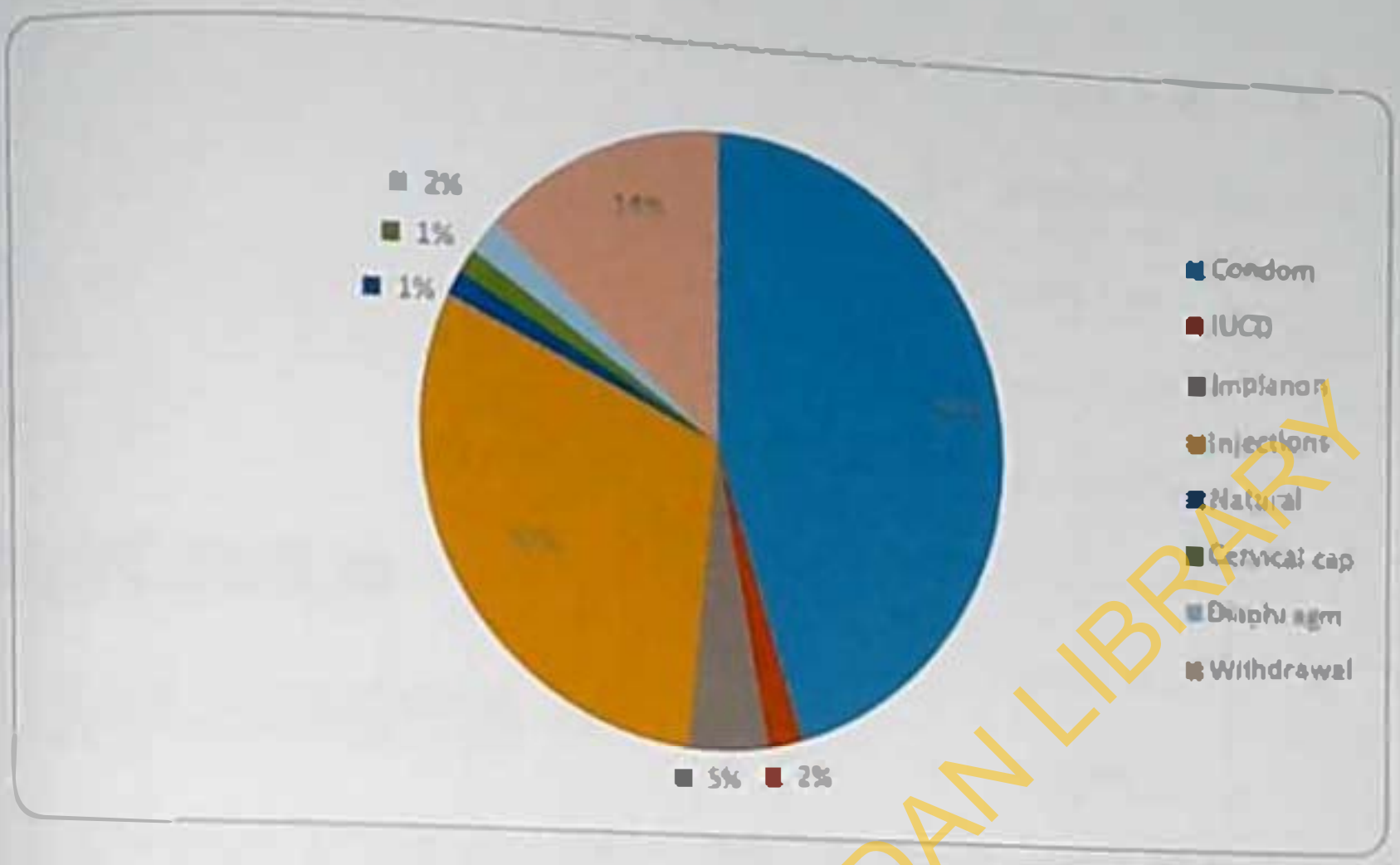
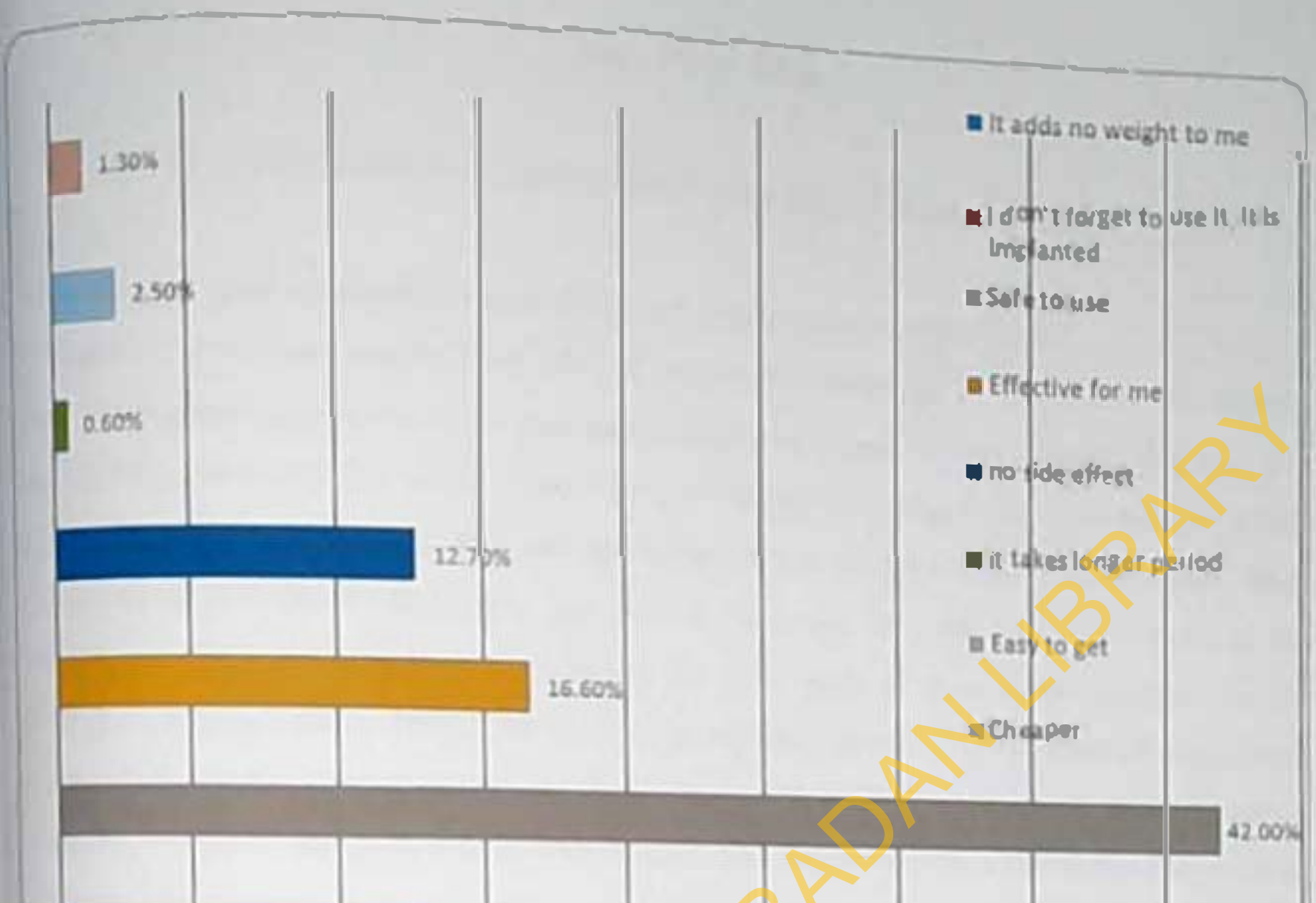


Figure 4.6: Respondents current family planning method



gure 4.7: Advantages of respondents' current family planning method over oral ntraceptive

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

Socio-demographic characteristics and related information of respondents

The ages of respondents ranged from 19 – 56 years with a mean age of 35.6 years. This implies that a large percentage of the target population consist of women in their reproductive age. The study showed that very few of the women have no formal schooling at all while more than half of the total population of the women has attained secondary school education as the highest level of educational attainment. Generally, the level of education for both men and women in the southern part of Nigeria is high compared to the other parts of the country according to the findings of national survey (NPC, 2008). This survey also showed that the level of educational attainment for both men and women are high in the urban areas as compared to the rural areas. Large percentage of educated women seen in this study might have been due to the composition of Ibadan North local government where majority of the residential areas are urban places. The effect of the influence of the University of Ibadan in this local government is also seen in the finding of this study as more than a quarter of the women have attained tertiary education. Majority of the respondents were married. This finding was similar to what National Population Commission found in 2008 which found that more than two-thirds (69 percent) of all women are currently married, and that an additional 2 percent were in format union. The proportion of respondents who practiced Christianity are higher than those who are Muslims which are higher than those who practiced traditional religion. This is in resonance with National Demographic Health Survey conducted by National Population Commission in 2008.

Knowledge of respondents on oral contraceptives Use

This study indicated that the most reported source of information about OC was health workers. This is similar to what obtains in most parts of Nigeria and indeed Sub Saharan Africa (Abasiattai et al; 2009) and Abasiattai et al; 2011). Unfortunately, the attitude of health providers towards particular contraceptive methods in developing countries have been shown to influence continuation rates among clients through the kind of information they give when interacting with clients (Tolley et al, 2005). Hence, there is need to evaluate the interaction between clients and

providers and also assess the quality of counseling and provider attitude towards oral contraceptives. In this study, the least most common source of information about OC was mdio. This indicates a pressing need to educate these women about the concept of OC and available methods to nvoid pregnancy through the use of mass media. An earlier study on knowledge, attitudes and pmctices towards family planning among women in the rural southern region of Jordan indicated that the most reported source of information about family planning was television, while health workers were the second most common source of information (Mahadeen et al, 2012).

Many of the women in this study demonstrated good knowledge of oral contraceptives use. This is contmiy to what Mahadeen et al (2012) where women in rural areas of the southern region of Jordan had incomplete knowledge about the concept of family planning and some women (8.7%) stated that they did not know whnt family planning refened to. In nddition, 8.4% of them claimed never to have heard about any method of avoiding pregnancy. However, in this study, more than a quarter of the respondents have poor knowledge of the pills. The study is in resonance with what Tessler and Peipert (1997) found out about the knowledge of oral contmceptive use among female college students. They found that 90% of their respondents correctly estimated the efficacy of oml contmceptive pills but over half of the respondents overestimated the effectiveness of condoms. In their study, Schnger and Hoffmann, (2008) recorded that women in their study demonstrated fairly good knowledge of commonly used birth control methods; two of the 3 questions answered most incorrectly relate to the effectiveness of condoms and birth control pills.

Further analysis of the questions on knowledge in this study, revealed that majority of the respondents were aware that oral contraceptives prevents unwanted pregnancy. However, about a half (44.7%) of the women didn't know that oral contraceptives can be used after abortion and 10.1% of the respondents thought that can only be used by married women. The findings showed that the depth and content of the information these women are exposed to from their sources on the knowledge of OC might be inadequate. Even though most of the respondent indicated that their sources of information on the knowledge of OC can be traced to the health workers. It is therefore imperative that the health workers are aware of the need to pass the right information; that is

adequate and to ensure that they provide avenues for all women to ask any question they have on the use of OC.

Prevalence of Use and Discontinuation of Oral Contraceptive

This study revealed that more than a quarter of the respondents were currently using oral contraceptive while less than two-third of the respondents had discontinued the use of OC at the time of the study. The results of a research carried out by Akintade et al (2011) had earlier revealed that OC discontinuation is a common practice among women of reproductive age. However, in this study, the prevalence of oral contraceptive discontinuation was 70.2%. This result shows that the OC discontinuation is very high. The discontinuation rate of OC seen in this study may be more than this because the study considered only married women of reproductive age, leaving out the single women. Also, it should be noted that this study only sampled women who were either using oral contraceptive presently or had stopped the use oral contraceptive. Previous study carried out in Nigeria by Akintade et al (2011) found that the prevalence of discontinuation among Nigerian women was 11.7%. Abasiattai et al (2011) in a research conducted in the South- South part of Nigeria found that Almost half of the clients in University of Uyo Teaching Hospital discontinued their pills and out of these, over half of them changed to another method of contraception.

Acceptance of Oral Contraceptives

This study showed that cost, sexual partner influence and distance to health facility were the major influencers of the decision to use oral contraceptive. In a study conducted in Ghana, women who were not using contraception at the time of the survey were asked to give the main reason why not. The reasons given were regrouped into nine categories: not having sex or having sex infrequently ('no sex'); being subfecund, infecund, menopausal, or having had a hysterectomy ('subfecund'); postpartum abstinence, breast-feeding or pregnancy ('recent pregnancy'); wanting more children ('wants children'); the respondent, her partner, other people, or her religion being opposed to contraceptive use ('opposition'); the respondent either not knowing a method or a source('lacks knowledge'); fear of side-effects or health concerns ('health fears'); costs of contraception, lack of access to sources, or inconvenient to use contraception ('supply problems'); contraception interferes with body's natural process, don't know or other ('other') (Nicholas, 2003). The reason most frequently given by women for not

using contraception was that they were not in a regular sexual relationship, and hence presumably did not consider themselves at risk. Over a fifth of former users gave a reason relating to a current or recent pregnancy.

This percentage was nearly 10 times the percentage of never-users giving this reason. Wanting to have a child was the reason for non-use by about a sixth of former users. Significant numbers cited health fears, with the percentage of former users giving this reason being somewhat higher than for never-users. In contrast, the percentage of former users citing opposition to contraceptive use by woman, her husband, other people, or by her religion was only a third of that for never users. Lack of knowledge of contraceptive methods or sources of supply was insignificant as a reason for none use by former users, but accounted for 13% of non-use by never-users. Contraceptive supply factors, such as cost or access to supplies, were cited by a small percentage of women not using contraception. No sexual intercourse was by far the most common reason for those whose last method was the condom, rhythm, or withdrawal, methods which require the active cooperation of a male partner. Reasons relating to a recent pregnancy or to wanting more children featured prominently for all methods. Women who last used pill or injectables were far more likely to cite health fears. Supply problems, particularly the cost, loomed large as reasons for not using contraception among women whose last method was injectables, and to a lesser degree, among former pill users. Relatively high percentages of women who used condom or withdrawal cited opposition as their reason. Of former users, younger women were more likely than older women to cite not having sex or having sex infrequently as their reason for not using contraception. Sub fecundity was the main reason for women aged 45-49 years, but was not important for younger women.

This study showed that the main sources of contraceptives in decreasing order of frequency, are the Clinics, patent medicine vendor, pharmaceutical store, and private sector. However, contrary the result of this study, various studies in the six geopolitical zones of Nigeria have indicated that the main sources of contraceptives, in decreasing order of frequency, are patent medicine stores, pharmacy shops, friends/siblings/partners, and health facilities (Oye-Adeniran et al 2005; Abiodun & Balogun, 2009). Clinic is the major sources of oral contraceptives probably because all the respondents were married. According to Okpani and Okpani, (2000), Abiodun and

Bologun (2009), more married than single women receive contraceptives from the government-run health facilities, including hospitals. In most communities in Nigeria, single women are therefore more likely to obtain contraceptive information and commodities from patent medicine dealers and not clinic or hospitals, because single women are not culturally accepted at conventional family planning clinics, especially those run by the government (Oye-Adeniran et al. 2005).

The trend of the patent medicine shop being the most important source of contraceptive commodities in Nigeria is worrisome. The type of information obtained on contraception from a patent medicine shop is likely to be incorrect because these shops are managed by traders who themselves may have little or no knowledge of contraceptives. Unfortunately, the pharmacy shops which are managed by qualified pharmacists are few in number and are limited to the urban areas. The patent medicine dealers, however, are more numerous and found in the vast number of rural and peripheral villages, where 60%–70% of the population resides. It is also in these rural areas that there are no practising pharmacists or doctors to advise on contraceptive choices.

Respondent's attitude toward the use of oral contraceptives

Overall, less than three-third of the respondents had good attitude. However, there is a significant gap in the information the respondents received based on some answers to some questions on their attitude towards the use of oral contraceptive. Majority of the respondents agreed that oral contraceptives can cause permanent barrenness. The myth that prolonged use of these pills leads to permanent sterility has limited their use in Nigeria, and it may explain why most young females in Nigeria, especially students prefer abortion to contraception for unwanted pregnancy (Otoide et al, 2001). In addition, the protective effects of oral contraceptives are virtually unknown by the majority of Nigeria's female population. This may explain why the proportion of women who used these drugs was low.

More than a quarter of the respondents also had the attitude that oral contraceptives encourage promiscuity. This percentage is high and this might have risen from the perception that if a woman has a method that will prevent her from getting pregnant then she may be liable 'to do anything she likes outside her matrimonial home as it will have no consequence'. In a qualitative

research by Ankomah et al (2013), it was discovered that in many traditional settings, young women who use contraceptives are perceived as promiscuous. Some participants, both male and female, in the study hold the view that if a woman uses family planning it means "she is loose woman, a prostitute". However, very few of the respondents agreed that oral contraceptives is against their religion or faith which is a positive attitude. In this study, not much information was gotten from the extent to which religion impedes the uptake of oral contraceptive. Earlier study by Ankomah et al (2013) discovered that majority of the participants from the Muslim north feel that family planning is against the tenets of Islam, which enjoins all to go and multiply. Others believe that you should not plan the family size as you cannot tell which child will be the one in future who will lift the family up or be somebody great. In their view, children are an act of God and as such any attempt at tampering with the process is seen as offensive to God. However, from this study, there was no consensus. Others, particularly female participants, argued that Islam does permit family planning based on health rationale. One female participant cited a radio programme anchored by a Muslim religious leader that motivated her to use contraceptives

Perceived Factors that influence the use and discontinuation of oral contraceptives

The results of the present study indicated that respondents' decision to continue to use oral contraceptives was majorly because they wanted protection from unwanted pregnancy. Other reasons cited were for child spacing and because OC has no side effect on them. However, side effect of the pill was the most common reason why people discontinue the use of OC. Missing pills and distance to health facilities were other major factors mentioned by respondents who discontinue the use of the pill. This is similar to what previous studies found on the discontinuation of OC pill. Rosenberg et al. (1995) found that side effects were reported to be the most commonly reported reason why women discontinue using the OC in a cross-sectional survey of 6676 European women. Women in that survey who reported past side effects were about twice as likely to have discontinued the OC as women who reported not experiencing side effects. The value of this comparison is limited, however, by the cross-sectional and retrospective nature of the data collection. Abiodun and Balogun (2009) identified lack of awareness, a lack of access, cultural factors, religion, an opposition to the use of contraception by sexual partners or family members, and fear of the health risks and side effects associated with contraceptives as barriers to the usage of oral contraceptive. Therefore, it would be an

added advantage if manufacturers of these pills can have the side effects of the pills written boldly on the pack so that before using, the women may be mentally prepared for such effect. Also since many of the women get their OC pills from the clinic, health workers have work to do in disseminating adequate information about the pills to their clients.

Missing of pills was another major factor contributing to discontinuation as seen from this study. Peterson et al (1998) found among oral contraceptive users that 16% of women indicated they missed three or more pills within a three-month period of using the pills. This showed how serious missing of pills can be. Factors associated with inconsistent use as identified by Peterson, Oakley, and Potter included new users, Hispanic and black ethnicity, low income status, and having had a previous unintended pregnancy. Although there was a trend for teenaged women to have a greater likelihood of inconsistent use compared with other age groups, the differences among various age groups were not statistically significant. These findings clearly suggest that there is a substantial need to improve the ability of women to remember the appropriate dosage of oral contraceptive pill, the time to use and probably have a partner who would remind them of the time to take the drug.

Implications for Health Education

Findings from this study have health promotion and education implications and suggest the need for multiple interventions directed at tackling the problem of discontinuation of oral contraceptive pills. It has been shown that knowledge of oral contraceptive pill is high among Ibadan residents but this knowledge has not translated into increased oral contraceptive continuation. This is because of the kind of information they receive on these pills.

Awareness of the existence of problems that can cause oral contraceptive pill discontinuation such as side effects and missing of pills should be well disseminated to the people to influence knowledge, acceptance and attitude about oral contraceptive pill. Awareness and increase in knowledge can be generated best in the hospital. Posters, pamphlets and educational materials should be placed at strategic positions to educate people visiting the clinic on a daily basis. Public enlightenment programmes can also include awareness campaigns which have the potential for reaching large number of people. While public enlightenment campaign can create awareness and influence knowledge, perception and attitudes and foster political will for action.

evidence of their effectiveness in changing behaviour remains insufficient (Whitaker et al, 2007). However, efforts must be made to combine it with other strategies such as peer education and policy intervention to effectively address oral contraceptive discontinuation. Public enlightenment techniques could involve the use of posters, leaflets, documentaries, jingles and bill boards (Whitaker et al, 2007). Use of one or more of these information media could be very helpful as the weaknesses of one could be counter-balanced by the strengths of others. According to the evident generated in this research, health workers are the major sources of information for oral contraceptive users. Therefore, the kind of information and knowledge of users depend largely on the quality of information they receive from the health facility. Health workers in all family planning clinics need to be trainned on how to pass information and what type of information to disseminate to OC users. Health workers' capacity should be enhanced through training to be able to provide oral contraceptive discontinuation prevention messages and counselling services for people. The effectiveness of training in enhancing peoples' capacity to solve public health related problems has been demonstrated in several studies, such as Oshinonie and Briver (1992), which effectively demonstrated the use of training to make Patent Medicine Vendors safer contact with their clientele.

Counselling as a health education strategy which facilitates the making of choices including the effectively used to address the problems of the side effects faced by oral contraceptive users. Counselling is typically characterized by one person assisting another person or group of persons to gain an understanding of themselves and their situations. Counselling people thus enable them to make and implement appropriate decisions (Bolt et al 2005). Professional counsellors or health workers should be trained to provide counselling services to people about the importance of contraceptives and present both the advantages and disadvantages of a particular brand or type of contraception.

Communities can be mobilized to discourage religious views, and cultural factors preventing the use of contraceptives generally. Community-based promotion programmes should target community norms and traditional gender roles that tend to prevent the use of contraceptives. The strategy could be used to change knowledge, attitudes, socio-cultural norms and practices that favour discontinuation of contraceptives. Community mobilisation is a participatory process that

focuses on changing community norms, basic patterns of social interaction, values, customs, and institutions in ways that will significantly improve the quality of life in a community (ACHA, 2008). Community mobilization should target prevailing misperceptions about contraception and oral contraceptive in particular. Another strategy that can be used to reduce the factors causing oral contraceptive discontinuation is advocacy. Advocacy is a process that can bring about change in policies, laws and practices of significant individuals, groups, communities and institutions (WHO, 2010). Advocacy could be used to promote gender equality and change socio-cultural factors such as baised gender norms, cultural beliefs and attitudes that promote or sustain non use of contraceptives. Advocacy interventions should target the the government of Oyo State, community leaders and community-based organizations including faith-based organizations. Advocacy can be made more effective by using locally generated data from systematically conducted studies. The use of research findings for advocacy has been shown to be promising in raising awareness and contributing to the shaping of reforms and policies (Ellsberg et al, 1997).

Combined use of two or more of the afore-mentioned health promotion and education strategies is prefered for preventing and controlling factors that could predispose to oral contraceptive discontinuation because of the inherent advantages.

Conclusion

The research explored the factors affecting oral contraceptive discontinuation among married women in Ibadan North local government area. The discontinuation rate was high and a number of factors were found to contribute to oral contraceptive discontinuation. One of such factors are side effects of the pills on the users and missing of pills. Oral contraceptive pills major sources are the facilities. They are available at the health facilities. A significant problem in Nigeria is a general lack of adequate information about the OCP. The myth that prolonged use of the OCP leads to permanent sterility has limited its use.

Recommendations

The study has provided information on the various aspects of oral contraceptive discontinuation. Therefore, the following recommendations if implemented may improve the uptake of oral contraceptive pill as a family planning method and decrease discontinuation of the pills.

- Manufactures of oral contraceptive brands should ensure that the side effects of the pills are well written on the packs. Such information will mentally prepare users before use.
- Government should increase accessibility of contraceptive services by proving scheduled outreach programs in remote areas
- State ministry of health should disseminate the information on the importance of accessing of family planning services through the media and community sensitization meetings
- Government should Campaign against harmful community norms and cultural beliefs that could hinder females from accessing the clinic for family planning services
- Service Provider should conduct test for family planning users to enable them obtain the desired and suitable Oral contraceptive before administration.

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APPENDIX I

QUESTIONNAIRE

FACTORS AFFECTING ORAL CONTRACEPTIVE USE AND DISCONTINUATION AMONG MARRIED WOMEN ATTENDING UNIVERSITY OF IBADAN FAMILY PLANNING CLINIC, IBADAN, OYO STATE

Dear Respondent,

My name is Adebanjo Timilehin, a Postgraduate student of the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan. *The purpose of this study is to determine the discontinuation rate of oral contraceptive and factors associated with its discontinuation among family planning clients in University Teaching Hospital UCH, Ibadan*. The findings from the study will help find out the factors that influence the discontinuity of oral conceptive use and how to improve on it. Your identity, responses and opinion will be kept strictly confidential and will be used for the purpose of this research only. Please note that you do not have to write your name on this questionnaire, also try and give honest answers to the questions as much as your maximum co-operation will assist in making this research a success.

Kindly indicate your willingness to participate or otherwise by ticking (✓) the appropriate box below: (1) YES ☐ (2) NO ☐

Official use only

Interviewer's name: ..... Serial No..... Date .....

Thank you for your cooperation

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

Instruction: In this section tick (✓) Please tick in the appropriate boxes that correspond to your answers or complete the spaces provided below

1. Age as at last birthday (in years).....
2. Educational Status [ ] 1. Primary education [ ] 2. Secondary education [ ] 3. Tertiary education [ ]
3. Religion 1. Christainity [ ] 2. Islam [ ] 3. Traditional [ ] 4. Others (specify).....
4. Ethnic group 1. Yoruba [ ] 2. Igbo [ ] 3. Hausa [ ] 4. Others (specify).....
5. Type of Family 1. Nuclear family [ ] 2. Extended family [ ] 3. Polygamous family [ ] 4. Others (specify).....
6. Occupation 1. Trading [ ] 2. Civil Servant [ ] 3. Artisan [ ] 4. Farmer [ ] 5. Pensioner [ ] 6. Others (please specify).....
7. Monthly income 1. N10, 000 or less [ ] 2. N11, 000 to N20, 000 [ ] 3. N21, 000 or above [ ] 4. Others (please specify).....
8. Number of living children _____

SECTION B: PREVALENCE OF CONTRACEPTIVE USE

9. Do you practice family planning?

1. Yes, I still do [ ] 2. Yes, I used to [ ] 3. No, I never practiced at all [ ]
4. No, I never had to (Please state reason)_____

If you picked 2 and 3, please skip to question 20

10. Age in years of first use of oral contraceptive_____
11. There was a prior use of oral contraceptive before last night 1. Yes [ ] 2. No [ ]
12. The last time an oral contraceptive pill was taken was

1. Last night [ ] 2. 2-3days ago [ ] 3. Last week [ ] 4. Fortnight ago [ ]
5. Last month [ ] 6. Last year [ ] 7. Others (pls specify) _____

13. Age in years of the last use of oral contraceptive_____

14. What type of family planning method do/did you use? 1. Strictly Artificial Family Planning or contraceptive use [ ] 2. Strictly Natural Family planning [ ] 3. Both [ ]

15. What Artificial Family Planning Methods have you tried?
1. IUCD [ ] 2.Tubal ligation [ ] 3.Implant[ ] 4.Spermicidal [ ] 5.Injectables[ ]
6.Withdrawal[ ]
7.Others_____

16. Why did you choose thismethod?_____

17. Did you have difficulty in the method/s that you have tried? 1. Yes [ ] 2. No [ ]

18. If yes, please state what particular difficulty you encountered during the practice of said method/s.

1. IUCD [ ]_____
2. Tubal ligation [ ]_____
3. Implant [ ]_____
4. Spermicidal [ ]
5. Injectables [ ]_____
6. Withdrawal [ ]_____
7. Other (pls specify)_____

SECTION C: ACCEPTANCE OF ORAL CONTRACEPTIVES

19. Why do you choose not to practice AFP
1. I want a big family [ ] 2. It is ineffective [ ] 3. I don't have the patience to comply with it [ ] 4. It is against my religion 5. I have no idea what it is [ ]
6. My husband will not allow it [ ] 7. I am contented with Natural Family Planning [ ]
8. Others (Please specify why)_____

20. At what age did you get married/started living in with your common-law spouse?
1. Below 20 years old [ ] 2. 20-29 years old[ ] 3. 30-39 years old [ ] 4. 40-49 [ ]
5. 50-59 years old [ ] 6. 60 years old and above

21. Have you ever been pregnant? 1. Yes [ ] 2. No but I have tried to be
22. If yes, how many times have you been pregnant? 1. 1-2[ ] 2. 3-4 [ ] 5-6 [ ]
7 and above [ ]
23. Was your first pregnancy planned? 1. Yes[ ] 2. No [ ]
24. Do you still desire to have more children? 1. Yes [ ] 2. No [ ]
25. Who mainly decides as to the number of children that your family should have?
1. Me [ ] 2. My husband 3. Both [ ] 4. Others (Please specify who)
_____

SECTION D: KNOWLEDGE OF RESPONDENTS ON CONTRACEPTIVE USE

Please tick(✓) in the appropriate boxes that correspond to your answers or complete the spaces provided below

S/N	Variable	Yes	No	I don't Know
27.	The use of contraceptive prevents unwanted pregnancy			
28.	Every contraceptive has its own form of side effects			
29.	Oral contraceptive is the only form of contraceptives			
30.	Oral contraceptives can only be used by married women			
31.	Oral contraceptive prevents Sexually transmitted infections			
32.	Oral contraceptive cannot be used with any other form of contraceptives			
33.	Oral contraceptive cannot be used after an abortion or miscarriage			
34	Oral contraceptives delay ovulation			

35. What are the types of oral contraceptives that you know?

a) _____

b) _____

c) _____

d) _____

36. What are your sources of information?

a) Radio

b) Television

c) Health worker

d) Friend

e) Others Please specify_____

37. Is there any side effect to the use of oral contraceptive? 1. Yes [ ] 2. No [ ]

38. If yes, give the side effects to a named oral contraceptive in the space below?

S/N	Name of Contraceptive	Side Effects
1.		a) _____ b) _____ c) _____ d) _____
2.		a) _____ b) _____ c) _____ d) _____

SECTION D: RESPONDENTS ATTITUDE TOWARD FAMILY PLANNING

Instruction Please indicate your **honest responses** for the questions. BE REMINDED THAT YOUR RESPONSE WILL BE KEPT AS SECRET AND USED ONLY FOR THE PURPOSE OF RESEARCH.

39. Have you ever used any of the contraception methods, Child Spacing or Family Planning before? *(Tick all that applicable)*

S/N	Types	Yes (1)	No (2)
39.1	Cost of family planning services prevents me from using it		
39.2.	I believe Family planning is against God's plan		
39.3.	I believe Oral contraceptives can cause permanent bareness		
39.4	Spermicidal		

SECTION F: THE FACTORS THAT INFLUENCE THE DISCONTINUATION PATTERN OF ORAL CONTRACEPTIVE

40. Who most influences you on your chosen form of contraception? 1. No one [ ] 2. My husband 3. My parents or relatives [ ] 4. My friends or my neighbors [ ] 6. My healthcare providers [ ] 7. The media (TV, radio, news) [ ]

41. Which of the following influence your use or non-use of oral contraceptives?

S/N	STATEMENT	YES	NO
41.1	Your Church		
41.2	Your Mosque		
41.3.	Your Culture		
41.4	Lack of knowledge		
41.5	Health related fears		
41.6	Inability to get (supply problems)		

APPENDIX II

OYO STATE ETHICAL APPROVAL

TELEGRAMS_____

TELEPHONE_____

MINISTRY OF HEALTH

DEPARTMENT OF PLANNING, RESEARCH & STATISTICS DIVISION

PRIVATE MAIL BAG NO. 5057, OYO STATE OF NIGERIA

Your Ref. No. _____

All correspondence should be addressed

to the Permanent Secretary

Our Ref. No. AD 13/479/21

November, 2014

The Principal Investigator,
Department of Health Promotion and Education
Faculty of Public Health,
University of Ibadan,
Ibadan.

Attention: Adebanjo Tinuke

Ethical Approval for the implementation of your Research Proposal in Oyo State

This acknowledges the receipt of the corrected version of your Research Proposal titled "Factors Affecting Oral Contraceptive use and Discontinuation among Married Women in Ibadan North Local Government Area, Ibadan, Oyo State."

2. The committee has acted upon compliance with all the ethical concerns raised in the initial review of the proposal. In the light of this, I am pleased to convey to you the approval of committee for the implementation of the Research Proposal in Oyo State, Nigeria.

3. Please note that the committee will monitor closely and follow up the implementation of the research study. However, the Ministry of Health would like to have a copy of the results and conclusions of the findings as this will help in policy making in the health sector.

Sola A[illegible]
Director, Planning, Research & Statistics
Secretary, Oyo State, Research Ethical Review Committee